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Once more this country has rendered its emphatic verdict against free-trade agitation. By an overwhelming vote the people of the country have shown their disapproval of every tendency toward free trade. If in some campaign all other questions could be eliminated except that of free trade or protection, this country would register such a vote for protection as no party ever received. In this election other causes contributed to the popular verdict, but the Manufacturers' Record believes that the chief reason was the tariff. With this so definitely settled, with universal prosperity among the farmers of all sections, with a marked improvement in business for the last few months, we are now in shape to enter upon the greatest industrial activity which our country has ever seen.

THE BRIGHT OUTLOOK FOR IRON

In his general review of the American iron trade, introducing the 1904 statistical report of the American Iron and Steel Association, Mr. James M. Swank, the general manager, presents a comprehensive survey of the movements contributing to the trade depression of last year, in which the iron trade shared. He notes that the prevailing opinion at the close of the year was that the depression could not continue, because there was no good reason why it should. He sketches the marked increase in the production of pig-iron in February last, indicating greater demand for finished products; the curtailment of output in June and July, as production outran consumption, and the general improvement in August and September. Writing about the middle of October, Mr. Swank said that the situation in the iron trade was distinctly favorable, as were also conditions outside the trade, crops of the year being abundant and there being general activity in all manufacturing lines, with the railroads doing a larger business than in the early part of the

year. Since that was written Mr. Swank, who is, perhaps, the leading authority on the iron industry in the country, has become even more hopeful, and on Thursday last he was quoted by the Philadelphia News Bureau as follows:

October closes and November opens with a feeling of exultation in the iron trade over the business situation and outlook to which it has been a stranger for more than a year. There is an active demand for nearly every product of our iron and steel works, and prices are advancing, particularly for pig-iron. The railroads lead the buying, as they need cars and locomotives, and they are buying rails more freely than in the earlier months of the year, but liberal orders for all kinds of pipe, structural material and other finished forms of iron and steel are also of daily occurrence.

Speaking of rails, the public has been badly informed about the tonnage for this year. It will not fall very far below that of 1903, which was the largest in our history, as was that of pig-iron, both products for 1903 exceeding the previously unequaled tonnage of 1902.

The iron trade of this country during the past 12 or 15 months has really been more scared than hurt. It has been a more active producer of pig-iron and of finished forms than is generally supposed. It has now recovered from the feeling of apprehension with which it has been to a certain extent oppressed, in sympathy with the stock market. The good crops of the year have contributed to a change in quotations in the stock market and to the change of sentiment in the iron trade. I look confidently for a continuation of the present active demand for iron and steel.

This view, from the statistician's standpoint, has its complement in the stock market, where, according to the weekly market letter of Watson & Alpers of New York, the position of the steel and iron industry appears to be growing stronger and stronger, the Southern trade accounts being especially encouraging. The letter dwells upon important matters, seeming to assure a great future for the steel and iron industries, and says:

A revolution is impending in the railroad world in the electrification of even trunk lines, a step made almost inevitable by the decision of the New York Central Railroad to replace steam with electricity on the entire length of the West Shore. There will be an enormous new expenditure here for iron, as well as copper. New methods have been introduced for the more economical loading of vessels engaged in the Lake ore trade. This means the building of new steel vessels for this trade of larger capacity than heretofore used. The double-tracking of the country's railroads that are still largely confined to single tracks is bound to make rapid progress. New and heavier equipment is being demanded as the roadbeds of the railways are strengthened by heavier steel rails and other improvements. The oil industry is growing so fast in Texas, California, Kansas and Wyoming—almost everywhere in the West, in fact—that the demand for pipe lines is bound to be heavy for years to come. The requirements for structural material, telephone lines, underground city roads, bridges and a vast variety of other work lie ahead of the iron and steel mills as never before. The financial ease of the railroads, now that the money market has become normal, enables larger expenditures for equipment and improvement. All the more certain it is that this work will reach considerable size, because the latest crop estimates tend to confirm a corn yield of over 2,500,000,000 bushels and a cotton yield in excess of 12,000,000 bales. The wheat crop, while deficient, is calculated at 550,000,000 bushels. Confirmation of the larger estimates of our agricultural outturn

may also be found in the gain in railroad earnings, which has set in well since early autumn, and which reflect the beginning of

advance purchases of merchandise, always inspired when the great agricultural sections feel assured of the year's crop results.

THE VISIT OF FOREIGN SPINNERS TO THE SOUTH.

On another page of this week's issue of the Manufacturers' Record is published special correspondence from Manchester, England, reflecting in most interesting light the attitude of the British cotton-spinners toward the project of a visit to the South of representatives of the world's textile interests. From the moment that the suggestion was brought to the attention of the Englishmen a most friendly spirit has, with rare exceptions, been manifested toward it on the other side of the water. One of the most recent expressions of that spirit was in an editorial in the Textile Journal of Manchester, scouting the idea that behind the invitation to visit this country was a design to capture the textile industry of Great Britain. The editorial points out that it is quite possible that Americans may furnish Englishmen with valuable ideas about the prospects of supply and about labor-saving devices, and that the visit to the cotton fields might result in some trading modus operandi rendering producer and consumer independent of any corner. It says:

As the years roll by there will be increasing demands upon the world's cotton plantations. It matters little, therefore, whether or not the agricultural resources of the Southern States of America are developed or the British empire cotton-growing enterprise, aided by the chartering of the Cotton-Growing Association by the King, will eventually make us independent of the cotton fields of the United States. What is more to the point is that all interested in the cotton industry are willing to be "smothered in cotton," and to let their destinies be carved in accordance with the traditional laws of supply and demand. We trust the American invitation will be cordially accepted by the international committee. Good-fellowship should be fostered in every possible direction, and if the gathering resulted in nothing of a really useful character being effected, yet the fact that we had met them would prove that we are in sympathy with everything that is being done to improve the relationships existing in the cotton industry in various parts of the world.

The reference to the international committee is to the body with members representing England, Switzerland, France, Germany, Austria, Belgium, Italy, Portugal and Russia, appointed at the first International Congress of Master Cotton-Spinners and Manufacturers held at Zurich, Switzerland, last May. This committee is charged with the task of watching over the common interests of the cotton industry, and has been in correspondence with American manufacturers since then. That fact explains the statements made in this week's special correspondence from Manchester in the Manufacturers' Record as to the attitude of English spinners toward the whole question of international co-operation in the cotton trade of the world. It is pointed out that hesitation about the suggestion made by the Manufacturers' Record and heartily endorsed by public opinion throughout the South is not due to any lack of appreciation or to doubt as to the practical usefulness of the proposed visit to the South, but that there is a desire on the part of the Englishmen to be quite sure that the visitors will be welcome by the trade organizations which they recognize as representatives of the cotton industry in America.

It may be suggested that the movement to welcome the representatives of foreign cotton manufacturers has become so comprehensive that it is likely to be a success, sooner or later, whether or not the New England Cotton Manufacturers' Association, or the American Cotton Manufacturers' Association, representing Southern spinners, fall in with it, though, to be sure, their co-operation is desirable, and it is believed that the foreign spinners, when they have become fully acquainted with the situation, will be assured of a pleasant and profitable welcome regardless of what may or may not be done by the organizations upon whose hospitality the English spinners now wait.

For their benefit it may be recalled that the idea of an international gathering was first embodied in a cordial invitation to the English spinners by financiers representing all of the Southern States who were in New York in attendance upon the annual meeting of the American Bankers' Association. These influential Southerners, without ignoring entirely the possibility of raising cotton in other countries, recognized the desirability of bringing the manufacturers of Europe to study the cotton-growing advantages of the South, and, at the same time, to acquaint themselves with the general opportunities of that section for cotton manufacturing and for other industries. The idea had been promptly seconded by Mr. Edward Atkinson of Boston, who saw in it a chance for emphasizing the influence of cotton as a factor in bringing peace to the world, and also by Mr. D. A. Tompkins of Charlotte, who believes that such a conference would lead to a large increase in immigration to the South as the quickest and most economic means of guaranteeing an adequate cotton supply.

These typical utterances from the two sections of the country, amplified and pressed by leading newspapers North and South and by textile organs of influence most immediately concerned with cotton in all its phases, were followed by tenders of co-operation from such railroad men as President L. F. Loree of the Rock Island Company, Second Vice-President W. W. Finley and Mr. M. V. Richards, land and industrial agent, of the Southern Railway; Assistant General Passenger Agent J. F. Merry of the Illinois Central Railroad, Chairman Henry Walters and Third Vice-President T. M. Emerson of the Atlantic Coast Line, Freight Traffic Manager J. F. Holden of the Chicago, Rock Island & Pacific Railway; Traffic Director J. C. Stubbs of the Union Pacific

Railway, and President J. M. Barr of the Seaboard Air Line; from Governors R. M. Cunningham of Alabama, J. M. Terrell of Georgia, Jefferson Davis of Arkansas, Thomp. B. Ferguson of Oklahoma, S. W. T. Lanham of Texas, D. C. Heyward of South Carolina, James K. Vardaman of Mississippi, W. S. Jennings of Florida, and N. C. Blanchard of Louisiana; from such manufacturers as Charles Adamson of the Cedartown Company of Philadelphia, T. I. Hickman of the Graniteville Company, operating two mills in South Carolina; F. B. Gordon of the Eagle and Phenix Mills of Columbus, Ga.; William T. Lang of the Brookside Mills of Knoxville, Tenn.; A. W. Haywood of Haw River, N. C.; M. W. Dunlop of Mobile, Joseph Norwood of Montgomery, Ala.; Lewis M. Parker of Columbia, S. C.; W. I. Woodward of Norwich, Conn.; John Neild of New Bedford, Mass., and the Russell Company of Middletown, Conn.; from Mayor Herman Myers of Savannah, Ga.; Mayor Evan P. Howell of Atlanta, John R. Young for the Savannah Board of Trade, George W. Fiedeman for the Savannah Chamber of Commerce, President M. J. Sanders and Secretary H. M. Mayo for the New Orleans Progressive Union, Vice-President M. E. Du Quesney for the New Orleans Cotton Exchange, Secretary Henry Hotter for the Memphis Cotton Exchange, President George W. Rogers and Secretary George R. Brown for the Little Rock (Ark.) Board of Trade, Secretary-Treasurer Alexander Helper for the Danville (Va.) Commercial Association, Secretary F. R. Rose for the Fayetteville (N. C.) Chamber of Commerce, Secretary C. B. Goetchn for the Board of Trade and the Commercial League of Rome, Ga.; Secretary W. G. Cooper for the Atlanta Chamber of Commerce, Secretary Woodhead for the Beaumont (Texas) Chamber of Commerce, Commercial Club of Birmingham, Board of Trade of Columbus, Ga.; President F. B. Gordon for the Georgia Industrial Association, Harvie Jordan of Monticello, Ga., president of the Farmers' National Congress; Secretary T. K. Turner of the North Carolina Board of Agriculture, Secretary Martin V. Calvin for the Georgia State Agricultural Society, Secretary H. E. Blakeslee for the Greater Mississippi Association, Southeastern Railway Land and Industrial Agents' Association, the Southern Cotton-Growers' Association, and the Alabama Commercial and Industrial Association, the central organization of commercial bodies in Alabama.

The Providence (R. I.) Board of Trade telegraphed to the New England Cotton Manufacturers' Association in semiannual meeting urging that body to join in the movement. Mr. Gustav Leonhardt, commercial attache of the imperial German consulate-general at New York, put himself in communication with it for the benefit of German manufacturers, and the interest in Manchester shown by representative papers, by President C. W. Macara of the Federation of Master Cotton-Spinners' Associations, Mr. J. H. Hutton, active in the British Cotton-Growing Association, and by others, was matched by that of such men as Marshall Stevens of Manchester, Thomas R. Ellison, the cotton expert of Liverpool; Atwood Violet, Capt. Hugh R. Garden and Col. Alfred B. Shepperson of New York, Prof. J. H. M. Beatty, at the head of the textile department of Clemson College, S. C.; John M. Parker, a leading cotton factor of New Orleans, and Tom Richardson, manager of the Portland (Ore.) Commercial Club, who for several years was active in practical work for Southern development and specially qualified to judge of the benefits to be derived from a meeting of foreign spinners and American growers and manufacturers.

From most of the organizations mentioned—organizations representative not only of Southern textile interests, but of practically all the progressive energies of the South—formal invitations were sent to England, while the expressions of individual cotton manufacturers, railroad executives, bankers and others indicate that the project will be worked out successfully and should lead the foreign spinners to take a position enabling their would-be American hosts to make definite plans for their visit.

NOISES OF CITY LIFE.

So good an authority as the Manufacturers' Record of Baltimore predicts that in a few years there will not be a surface street-car track in New York city. They will be supplanted there and elsewhere by automobiles and trackless trolleys, and there will be many to say that nothing in their life became them like the leaving it.—Boston Watchman.

Our good friend the Watchman is mistaken. The Manufacturers' Record did not make such a prediction, but it did publish an interview with a very able engineer intimately identified for many years with street railroads in which he made such a forecast. Are his views plausible? Possibly he may be looking a little farther into the future than most of us, or possibly he may have a clearer vision of coming events than the rest of us. Certainly his views as expressed in that article have attracted wide and serious discussion in this country and in Europe. As one hears him discuss the subject and listens to his forecast of the near future, when noiseless automobiles or auto-buses are to supplant the noisy car, when rubber-tired auto-trucks are to take the place of the nerve-racking wagons and horses of today, when the horse is to be relegated to the country or be used only by a comparatively few horse lovers for pleasure driving, and when the city streets are to be freed from the droppings of horses which now forms so large a part of the dirt

accumulations of every street, his views, which at first sound like the visions of a dreamer, command serious attention. Sundry his statements, note the scientific foundations on which they are based, grasp the mighty changes now coming upon the world in the cheapening of power and the consequent reduction in the cost of operating auto-buses and auto-trucks; then remember that only 18 years ago every street railroad in the world was operated by horse-power, and that now, broadly speaking, every one is operated by electricity; think, too, of the barbarous health-destroying noises of electric cars, of elevated roads and the thousands of equally noisy horses and carriages and wagons that throng the streets of every city, and we may conclude that the wonderful changes predicted ought to be realized, and that for the good of humanity they cannot come too soon. Think for a moment of how the noises of city life, mainly horses, wagons and cars, are jarring every nerve of every soul within a city's confines. We don't realize this until the tired nerves give out or other sickness comes upon us, but then every passing vehicle, every noisy car, jars every nerve and makes restful sleep well-nigh impossible. Year after year we go on content to live under conditions of rough pavements and noisy vehicles, heeding little their killing influence on ourselves as well as on every-

body else. It is a wonder that protection to health, to life itself, has not long since forced the people of every city to adopt smooth pavements, and, as far as possible, demand noiseless vehicles without regard to the cost involved. We talk about preventable diseases; we spend millions for pure water and for sanitation, and we do well, for human life is at stake; but we forget that human life is likewise at stake from every jarring noise that racks our brains and tires our nerves. Once in a while, in the desperate illness of some loved one, if we have sufficient influence we have a whole square roped off that no vehicle may pass there, or we cover it with tanbark to deaden the sound of passing wagons, and yet thousands of other loved ones must suffer and perhaps die for lack of such quiet. And yet if our dreamer is correct, and we almost believe he is, the time is coming when the pounding of horses' hoofs and the roll of wagons, and perchance in some streets, if not in some cities where there are hundreds of miles of smooth pavements, even the noise of the electric car may be heard no more. What an unspeakable blessing to humanity such a change would be! How the tired nerves and aching brains would grow strong again with an absence of the killing noises of city life! And when we come to think about it, such a change would not be one-tenth so wonderful as the electric car itself, nor one-hundredth part so wonderful as the telephone or wireless telegraphy.

We are in an age of mechanics, of revolutions, or rather of evolutions, in all mechanical interests, of advancement of changes so rapid that no man dare say anything is impossible; and so far as such a change as this is concerned, think for a moment of the fact that only five or six years ago the automobile was looked upon as a fad, a plaything of the idle rich, while now it is growing in such universal favor that this same engineer whom we have quoted claims that the output of automobiles and auto-buses in the United States last year exceeded in value by \$20,000,000 the output of locomotives. Every year shows a lessening of their cost, improvement in their construction and adaptation to new uses, so why should they not only so completely displace the horse for all hauling purposes in every well-paved city that a few years hence a horse and a dray may look as much out of place as would a yoke of oxen to a wagon look out of place in New York today! And as to the car, no one would claim that we have reached perfection in street travel, and there is no more reason why we should not see some great and sudden improvement over the electric car than there was 18 years ago why the electric car should not supplant the cable car as that had supplanted the horse. We are in an age of evolution, when changes of mighty moment come upon us in a day, and if the next change should mean less noisy cities, surely the whole world would have cause to rejoice.

A THREAT FOR 1906.

In the closing days of the campaign Mr. John Mitchell, leader in the anthracite miners' coal strike of 1902, emerged from the reticence of syndicate letters describing his views of foreign labor conditions to tell Pennsylvania miners that it was fallacious for them to argue that they could not excuse failure to pay dues to the union on the ground that the advance in wages has been counterbalanced by the increase in the cost of living. He quoted the national

Department of Labor to prove that the rise in wages had been greater than the increase in cost of living during the past four years. Such a statement coming from such an authority ought to settle the matter. But it does not. In the first place, the figures of the Department of Labor are too meager to form the basis for any generalization. In the second place, men who know that the cost of living has increased at greater speed than wages are not concerned with government statistics furnished for campaign purposes.

The Pennsylvania miners were not only informed by Mr. Mitchell that they didn't know anything about their own finances, but were terribly threatened with being left in the lurch by him. He told them that he wished to see such relations established between employer and employe as shall make strikes, lock-outs and blacklists impossible, and for the encouragement of such relations he said:

Nineteen hundred and six will soon roll around, and what are you going to do? If you are not organized I won't work for you. I am not satisfied with conditions here. The hours are too long and the wages are 25 per cent. lower than they are in the bituminous field, where the workday is an hour shorter.

Perhaps the Pennsylvania miners may not put as high a value upon the work which Mr. Mitchell is supposed to be doing for them as he himself places upon it, and that is, perhaps, why he finds imperfect organization, which means that the miners are not contributing as freely as he thinks they should to the support of the men whose business tends to create dissensions between employers and employes. Of course, Mr. Mitchell is not concerned about himself. He is independent of all that now. But the Pennsylvania miners might with profit to themselves suggest to him that if he is not satisfied with conditions in the anthracite field he might confine himself to the bituminous field, the literary fields or the political fields. Certain it is that should another strike occur in 1906 Mr. Mitchell's speech will be of material assistance in enabling an outraged public to fix the responsibility for it.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 56 and 57.

MAL-ADVERTISING THE SOUTH.

In the course of an editorial on immigration to the South the New York Journal of Commerce, which is of quite friendly disposition toward the South, makes a point which should be carefully considered and practically applied by the great railway systems and other interests that should be in the van in inducing settlers from abroad or from other parts of the United States to find homes in the South. It says that there has been no such effort to make known to possible immigrants the opportunities in the South and to attract them as has been the case in other parts of the country needing population; in short, that the South has not been advertised efficiently. At the same time the Journal of Commerce calls attention to methods of mal-advertising of the South, against the effects of which immigration workers have to contend. It says:

There is no use in blinking the fact that political and social conditions in the South, as generally understood, whether rightly or wrongly, have tended to repel rather than attract immigrants, who wish to be assured not only of work and of homes, but of peace and order, the protection of their rights, fair

treatment in all their relations, and reasonable facilities for the education of their children. Stories about the treatment of negroes, the condition of poor whites, the uncertainty of legal protection, social prejudice, political intolerance and the lack of adequate school facilities are not without effect in diverting immigration from the South. So far as they are founded upon misrepresentation and produce misconception, effort should be made to counteract their effect by more accurate information. So far as there is ground for them, and they are not wholly without foundation, every effort must be made to remedy the conditions that have a repellant influence.

The Journal of Commerce might have added, and that would have explained much, that it is only necessary that systematic efforts to induce immigration to the South develop for the stream of misrepresentation of Southern conditions, to be turned loose in certain Northern publications.

The Manufacturers' Record knows that even in spite of the misconceptions thus cultivated, the great body of substantial and intelligent citizens of the rest of the country—the men and women who recognize that Southern conditions are unique largely on account of the persistency of malevolence or intolerant dogmatic theory in specializing them—have no sympathy with the misrepresentations.

Until recent years the cultivation of such misconceptions was monopolized by aliens to the South, whose purpose was plainly visible. It was either to bring public opinion to bear upon the carrying out of their sociological schemes confined to the South, or to appeal to the rancor or mudsill sectional politics.

Unfortunately, the latest misrepresentations of the South, tending to the same distressing ends, however lofty the purposes may be, have been based upon the propaganda known for short as the Ogden Movement or Ogdenism, and having among its agencies the Conference for Education in the South, the General Education Board and the Southern Education Board. To this movement have been attracted a number of earnest and disinterested folks, unwilling to neglect any specious promise of the furtherance of education, without the time or opportunity to investigate the matter in all its bearings, and therefore depending for information about it upon the expressions of its attorneys-at-education, who, they are probably unaware, are salaried workers, recipients or expectants of direct or indirect benefits, or inspired by a desire to push theories discredited again and again by facts. Some of them are of Southern stock, some of them of Southern birth and "education;" some of them are needy, some of them have been brought through untoward circumstances into a frame of mind that unconsciously casts its anchor to any kind of windward.

It is not believed that any of them would willingly injure the South or willingly give any pretext for misrepresentation of it. But it is a fact that the statements and the statistics which have been circulated under the auspices of their enthusiasm and incompetency have been the basis for a cultivation in the North of misconceptions about the South, to the discouragement of immigration and to the raising of the sectional issue in the campaign just closed.

Only last week the Manufacturers' Record called attention to the black eye given to the South among the cotton operatives of Great Britain because of the misrepresentations there about the South based upon a sociological agitation in which the Columbia (S. C.) State shared mightily, without, we are

convinced, knowing it, and inspired solely by the belief that it was laboring for the best interests of South Carolina, and we feel sure that the Columbia State will come to see that it was as mistaken in cherishing Ogdenism as it was in getting into the position which brought to its office Marie Van Vorst, with her letter of introduction from an English female social agitator.

Proofs of the direct connection between Ogdenism and the negro suffrage plank in the Chicago platform have already been presented in detail, and need not be reproduced here. What is expected of that movement by the principal agents in mal-advertising of the South may be indicated in the fact that the principal journalistic exponents of Ogdenism in its home are the New York Evening Mail, the New York Tribune and the Philadelphia Press, and in the additional fact that the annual reports in these papers of the Conference, which is the Southern decoration of the Ogden Movement, deal largely with the negro institutions that are hobbies of its promoters.

The knowledge that legitimate efforts to better Southern conditions, akin to efforts to better like conditions, if not worse conditions, in other parts of the country, will be twisted into the means for maligning the South, almost deters from prominent action in that direction Southern men and women who have no axes to grind.

A MUCH-MALIGNED FOLK.

"There is more ignorance, more immorality, more downright heathenism in lower New York than in all the Southern mountains put together," is a statement by Bishop E. E. Hoss of the Southern Methodist Church that should bring pause to the support given by uninformed honesty to political and sociological agitation against the South turning upon the alleged ignorance and criminality of its white population. Elaborating his statement in the Christian Advocate, Bishop Hoss says:

The great majority of the mountaineers, as I have before said, are excellent citizens, loving their country and its flag, obeying its laws without reluctance, and ready to fight for it whenever any fighting needs to be done. They are the descendants of the men who rode with Sevier and Shelby to Kings Mountain in 1780 and of those who followed Jackson to New Orleans in 1815. In the Civil War they divided sharply. Neutrality is foreign to their natures. They are always on one side or the other, and have a perfectly glorious capacity for partisanship. The bulk of them till their own land with their hands. They are great lovers of their homes and their families. Honesty, courage and hospitality are almost universal among them. Corncribs go unlocked the year round, and families work in the field, leaving their houses unoccupied and wide open all day long. To be known as a coward is to lose standing. To turn away a stranger who seeks food or shelter is unheard of. Anarchists and communists are, of course, out of the question. Belief in Christianity is widespread, and is followed by membership in some church.

The whole population of the Appalachian region from Southern Pennsylvania through Virginia, Tennessee, Kentucky, North Carolina and Georgia is small. Of this population, moreover, at least three-fourths or four-fifths is well fed, well housed, well clothed and reasonably well educated and evangelized. If anybody doubts the assertion, he has only to make a careful inquiry to convince himself of its correctness. The region in question includes such towns as Roanoke, Wytheville, Bristol, Knoxville, Chattanooga, Huntsville and Asheville. It also embraces immense areas of fine farming and grazing lands and inexhaustible beds of iron, coal, copper, marble and other minerals, and is now passing through a most remarkable development. There may be a few counties in Eastern Kentucky yet lying beyond the rim of modern civilization and inhabited mainly by long-haired and long-legged folk who get their living by fishing and hunting, though I

doubt even that. Certainly there are no such counties in Tennessee, and, as far as my knowledge goes, there are none in North Carolina or Georgia. It is possible to find here and there in the remoter coves scattered communities that have fallen utterly behind in the race, and are maintaining a hand-to-mouth existence, without thought of better things. But the number of such communities is relatively small.

My deliberate judgment, based on a pretty extensive observation, is that 250,000 is a large and liberal estimate of the number of debased and besotted souls who really answer to the current descriptions, and these are scattered over a great stretch of territory. Nor are they confined to the Southern mountains. I have seen them coming down out of the woods at Highland Falls, N. Y., carrying their little bundles of kindling and their baskets of berries for sale, and I understand, on good authority, that one may run across them even in New England.

Without considering the immorality in upper New York, revealed constantly in descriptions of its social relaxations and diversions disguised as marriages, and the crimes in the same circle so immense that they are without law and above law, a few facts published recently tend to confirm Bishop Hoss' comparative estimate. The annual report of the New York police department for 1903 shows that with an increase in the population over 1902 of over 2½ per cent., the increase in the number of arrests was 20 per cent. There were 143,190 men and 32,681 women arrested, a total of 175,871 persons, of whom 24,426 were under 20 years of age and 85,376 were white native Americans. Of the offenders 9043 were charged with the graver crimes of grand larceny, burglary, robbery, arson, homicide and felonious assault, 53,000 with intoxication, 37,400 disorderly conduct, 14,242 violation of corporation ordinances, 10,731 assault and battery, 6548 violation of liquor-law tax, 6456 petty larceny, 6372 vagrancy and 8573 on suspicion.

Furthermore, the Chicago Record-Herald is authority for the statement that within five weeks after the 1st of August there were 22 murders in New York with only half a dozen arrests, 72 cases of felonious assault with no arrest, and in Manhattan and the Bronx 54 cases of burglary and highway robbery with no arrest. When to these figures are added those of the thousands who are privileged to get drunk without being arrested, and of others who are permitted to violate with notoriety but with impunity even federal statutes, it is fair to believe that the criminal class and the depraved of New York city alone, a city spending annually more than \$10,000,000 for its police department and more than \$20,000,000 for its schools, is greater in number than the whole class in the Southern Appalachians from whom criminals and other wrongdoers may be possible recruited.

New York has other crimes going into the heart of things and largely responsible for the rich fruitage in arrests. An attorney for the federal government is quoted by Broughton Brandenburg in the Boston Transcript to the effect that 30,000 bogus naturalization papers—which mean, of course, 30,000 illegal voters, enough to determine the result of a national election—exist in New York city. Mr. Brandenburg says that New York is bad enough with its hordes of illegal citizens, but that Philadelphia—with its "waste and thievery and debauchery of the ballot-box," according to the North American—and Pittsburg are the very worst of all, and he adds:

I have known of cases where 30 or 40 newly-arrived Italians, waiting in a padrone's lodging-house for shipment to the company which had contracted for their labor, were hastily supplied with naturalization papers, taken out and registered, held for three weeks in the house at the ward boss's expense and then voted. Two of the men told me after-

ward that it was some weeks before they learned that what they had done was not some private process which had to do with their going to work in the mines.

Mr. Brandenburg finds also that the Germans in certain election districts of Cincinnati have done just about as they pleased for many years in the matter of voting without naturalization, but have, since the adoption of a strict law, resorted to fraudulent registration, and that Canadians in cities from Boston to Detroit vote with equal facility in Canada and the United States, but he says:

South Boston has furnished about the worst case of fraud that I have yet found, though all Massachusetts—in fact, all the New England industrial centers—are full of these outrages against legitimate American citizenship.

Here are sidelights upon the political corruption in these centers of enlightenment and the homes of camel-swallowing energies straining in behalf of the gnats of Southern civilization. Other sidelights are thrown in the statement made on the ground that the cases of nearly "5000 abused and neglected children have been investigated during the past year" in Massachusetts; that "absolute heathenism seemingly reigns now in whole sections once occupied by the best types of Christian manhood" in New England; that in parts of Rhode Island "every day in the week they are guilty of theft, murder and adultery;" that there are abundant cases of polygamy in Connecticut; that there are "150,000 boys between 16 and 21 who are loafing today about the slums of Greater New York, nerveless, purposeless," and that "there are people living in Philadelphia who have reached a state of horrible depravity"—in Philadelphia, which, according to the Record of that city, has 130,000 fraudulent names on the voting books.

It is not expected that these facts will suppress the efforts of sociologists who make their living by agitating the subject of Southern illiteracy and crime. It is hardly to be expected that they will even bring to their senses the diminishing few at the North who give such agitation a standing. The spirit prevailing there is well manifested in the statement made by the New York Commercial commenting upon the horrible record of 1903 crime:

New York is a much better city than she seems—vastly better than most of her outside critics believe.

The facts about New York city and other portions of the country have not been cited in captiousness. In the matter of crime no section of the country ought to avoid the attitude of the Publican who stood afar off and beat upon his breast, saying "God be merciful to me, a sinner." At the same time, no section is less qualified to pose as a Pharisee toward the South than that section where dwell a few men who have persuaded a few Southerners to bulwark their impertinence.

Talking Up Improvements.

Under the auspices of the Little Rock Board of Trade a talkfest is to be held one evening this week for the purpose of interesting citizens in questions affecting the healthy growth of the city. Representatives of different interests are to talk for five minutes each about such projects as the new \$1,000,000 capitol, the new \$300,000 hotel, the \$100,000 Young Men's Christian Association Building, the necessity for a sewer system for the entire city, the placing of wires under ground, the union depot, the electric railway system, the water company, the clearing-house and the railroad to the region of zinc, marble and red apples.

PROPOSED INTERNATIONAL COTTON CONGRESS.

The Attitude of English Spinners Toward the Invitation to Visit the South.

[Special Correspondence Manufacturers' Record.]

Manchester, England, October 25.

Six weeks ago, on September 12, the cotton spinners of Lancashire and Europe had their attention called to the proposals of the Manufacturers' Record for an international cotton congress to be held at an early date in the Southern States of America. The idea was mooted by letters from Mr. R. H. Edmonds of Baltimore and Mr. Edward Atkinson of Boston to the editor of the Manchester Guardian, which is not only by far the most influential journal circulating in the cotton-manufacturing districts of England, but is also read wherever cotton is spun in Europe and India. No better medium could therefore have been chosen for acquainting European cotton spinners and manufacturers with the scheme, and the Guardian has given up columns of its space to reproducing American expressions of opinion from the editorial and news columns of the Manufacturers' Record and other newspapers, as well as to the views expressed by English cotton men. The consequence is that the scheme has been thoroughly well ventilated, and it is now possible to gauge with tolerable accuracy the prospects of its acceptance over here.

First of all, it is necessary that your readers should understand the attitude of the English cotton spinners towards the whole question of international co-operation for objects of common interest to the cotton trade of the world. The cotton spinners of Lancashire are themselves probably the most perfectly and thoroughly organized body of employers to be found in the cotton industry anywhere. This perfection of organization was no doubt forced upon them in the beginning by the complete organization of the English cotton operatives; but, having learned the utility of organized co-operation in all matters pertaining to labor, the Lancashire employers were not slow to realize that their association could be made equally useful to them in devising and securing united action on all matters affecting the interests of their trade. This was, of course, but a step on the way to a realization of the further advantages which might be gained by a much wider organization which should embrace the cotton spinners of every country in the world in which the industry has attained any advanced stage of development. Accordingly the English Federation of Master Cotton Spinners' Associations, under the able leadership of its president, Mr. C. W. Macara, convened an international conference of the cotton trade, which was held at Zurich, Switzerland, last May, and resulted in the appointment of an international committee representing all the principal countries in which the manufacture of cotton is carried on. It was very much regretted that, owing to the shortness of the notice convening the Zurich congress, it was impossible for any delegate from the United States to be present, but Mr. Macara, who has been elected president of the international committee, informs me that he is in regular communication with the New England Cotton Manufacturers' Association and the Southern Cotton Manufacturers' Association at Charlotte, N. C., to both of which he has sent, on behalf of the international committee, very cordial invitations to join the new international association. It will thus be seen that the English spinners are firm believers in the value of international gatherings and discussions of matters touching the welfare of the trade, and that they desire nothing more than to be on terms of

good-fellowship with their American colleagues. Any hesitancy on their part to act upon the suggestion first made by the Manufacturers' Record, and so heartily endorsed by public opinion throughout the South, must therefore be referred to other causes.

What are these causes? In the first place, they are not to be sought in any want of appreciation of the kindness and sincerity of the invitation of your people or any doubt as to the practical usefulness of the proposed visit to your Southern mills and cotton fields. Mr. Macara has publicly expressed the opinion that if such a gathering took place it would do nothing but good, and this is the view taken by the overwhelming majority of the trade, although there are one or two exceptions, to which I shall refer later. The progress of the cotton-manufacturing industry in the Southern States has been watched with the greatest interest in England, especially since 1902, when Mr. T. M. Young, commercial editor of the Manchester Guardian, made an extended tour through the Southern States on behalf of that paper and published his book, "The American Cotton Industry," which has been widely read not only in England, but also in France, Spain and Japan (into which languages it has been translated), and in many other countries. In that book a close account is given of the economic, technical and social conditions of the cotton industry in the Southern States, and of the prospects of the cotton supply, and there are undoubtedly many spinners and manufacturers who would welcome an opportunity of seeing what they have read about and of carrying their investigations further. The delay which has arisen in the arrangement of a deputation to visit your country is due, therefore, to no unwillingness to go, but rather to a desire that before going our representatives should be quite sure that their presence is desired by those trade organizations with which they have hitherto been in correspondence as the duly constituted representatives of the cotton industry in your country. I have no hesitation in saying that if Mr. Edmonds' proposal is supported by the two cotton-trade associations already named, and if they interest themselves in making arrangements for the proposed conference in the South and issue the invitations to it, the representative people in England, and possibly in other European countries, will accept it with pleasure and at a convenient date will attend such a conference as has been suggested. It is, I am afraid, equally certain that if no such action is taken by your representative cotton-trade associations, our trade leaders here, whilst sincerely grateful for the invitations which they have already received from individuals, meetings and public bodies in various parts of America, will take no official action. That is just how the matter stands at present. I cannot do better than quote in this connection a leading article which appeared in the Manchester Guardian of the 20th inst.:

"Many individuals, including most of the recognized leaders of the cotton trade, have welcomed the suggestion, but officially the Lancashire cotton industry is waiting for the scheme to take a more tangible form and to be brought before it in a definite and authoritative manner. Smith, as it were, has suggested to Jones that it would be very pleasant if the Joneses would come and spend a week-end at Smith's place in the country. Jones

has politely agreed that such an expedition would be delightful, but he and Mrs. Jones will not begin to pack up and consult the railway guide until Mrs. Smith, in due course and form, intimates her desire that they should come and also names a day. 'Mrs. Smith' in this case means some association of American cotton manufacturers equal in standing and authority to the English Federation of Master Cotton Spinners' Associations, or, failing that (for we are not quite sure that such a body exists in America, representing the Southern as distinguished from the Northern mills), some representative organization formed for the purposes of this proposed international congress."

I have said that there are a few exceptions to the general expressions of approval and sympathy with which the invitation of the South has been received in this country, and, as it is desirable that Anglo-Saxons should be perfectly candid with one another, I propose to explain shortly what they are and from whom they come. I need only allude briefly to the ridiculous suggestions made by certain London newspapers like the Daily Mail and Daily Graphic that your invitation to Lancashire cotton spinners is like the famous invitation of the spider to the fly; that it is prompted by dark designs upon the prosperity of our cotton industry, and that you hope that if the Lancashire flies "walk into your parlor" they will "ne'er come out again." Nobody connected with the cotton trade takes the slightest notice of opinions which such papers offer upon matters affecting the industry, for the ignorance of Londoners in such matters is profound. They appear to think that the Lancashire manufacturer is so simple that he is not capable of looking after his own interests, and that you Americans are so designing and astute that the cotton industry of this country, in which \$600,000,000 are invested and nearly 750,000 operatives are employed, might be transferred across the Atlantic if our industrial leaders allowed themselves to listen to your siren voices. Those who know the Lancashire man best are well aware that impetuosity is not one of his faults, and that he needs a great deal of persuasion before he will, even in small matters, forsake a tried for an untried way.

The Textile Recorder, however, which, as you are probably aware, is a monthly trade journal of high standing, has surprised many of its readers by throwing cold water on the proposed visit to America and professing its inability to see what useful purpose could be served by it. There is apparently a disposition in some quarters to think that the underlying motive in Mr. Edmonds' suggestion is a desire to alienate English sympathy from the work of the British Cotton-Growing Association by getting our spinners over to the Southern States in the season of an exceptionally large crop and impressing upon them the futility of attempting to raise cotton anywhere else. I very much regret to say that Sir Alfred Jones, who happens to be the president of the British Cotton-Growing Association, has addressed to some of the newspapers a letter in which the invitation sent by the Bankers' Convention is very ungenerously interpreted and a somewhat bitter attack is made upon the presumed motives of America in inviting English spinners to visit the Southern cotton fields. But I hasten to add that Sir Alfred Jones appears to have written entirely without the knowledge or approval of the council of the association, and that he is not himself interested in the cotton trade or in any way connected with the manufacturing industry. He is a Liverpool shipowner, whose principal trading interests are on the west coast of Africa, and he has

neither knowledge nor authority entitling him to speak on behalf of the great industry which has its center in Manchester. In order to show that in this matter he does not even express the view of the British Cotton Association, let me quote a public statement made a few weeks ago by Mr. J. Arthur Hutton of Manchester, the vice-president and real head of the association. Mr. Hutton said that "he did not see how an international conference of cotton manufacturers in the Southern States could possibly do any harm, while, on the other hand, he had not the slightest doubt that it would do good. As to the possibility, hinted at in the opinions collected by the editor of the American Manufacturers' Record, that the conference might lead to an increase in the cotton-growing area in the Southern States, Mr. Hutton, speaking as an individual, thought the British Cotton-Growing Association will not in the least mind such a development. The association would, he considered, be only too glad if the Southern planters would grow more cotton, though, as the operations of the association were limited by the terms of the charter to the encouragement of cultivation within the British empire, he did not see that it could do anything to stimulate production in America. An increase in the area under cultivation in the Southern States, he pointed out, would not in any way lessen the importance of the association's work, for if new sources were not developed in other parts of the world manufacturers would still be dependent for their supply on the vagaries of the weather in a particular country. It was therefore in the interests of American as well as of British manufacturers that the sources of supply should be multiplied."

Of course, those who favor the scheme have not been slow to point out that American cotton manufacturers would not be found supporting a movement which had for its object the transfer of mills from Lancashire to their own country, to be run in competition with their own, and that it is just as absurd to suppose that American consumers of cotton wish to strike a blow at our efforts to increase the supply of cotton, since the short crop of last season was just as disastrous for them as for us. The opinions of the more practical and reasonable cotton men are fairly represented by the following passage from a recent article in the Manchester Guardian, with which this letter may appropriately be brought to a conclusion:

"Some Americans may support this movement out of a pardonable pride in their own achievements, which they desire the world to see and admire; others because they think an inspection of their cotton-growing resources would discourage competition in our own colonies; others because they desire to attract European capital and immigration to the Southern States; others because they hope to learn something useful from intercourse with the European visitors, and others because they are animated by a desire for international industrial comity. Very good. If there are any other interested motives prompting this invitation, let us take them all for granted. Having done so, let us ask ourselves what our motives would be in accepting such an invitation. Would they be purely disinterested and self-sacrificing, or should we, too, have some base intention of profiting by the occasion to learn something of the industrial and technical methods of our rivals, and maybe to enter into closer relations with the producers of cotton, so that we might buy our raw material better? Should we not even look forward to a little personal enjoyment? Of course we should; and whilst the Americans were doing their best to profit by our presence amongst

them we should be similarly engaged on our own account. We have every confidence that Lancashire would not be the loser on the balance. But whilst it is well to make it clear that if we go we do so in our own interest (just as the Americans have not sought to hide their reasons for

asking us), let us also recognize that there is a virtue called hospitality, and that nowhere is it practiced more heartily and gracefully than in the Southern States of America."

This is a frank and honest statement of the position.

Reasons for New England's Industrial Growth—IV.*

[Special Correspondence Manufacturers' Record.]

Providence, R. I., November 7.

While the marvelous success of B. B. & R. Knight may be an argument in behalf of the all-compelling power of individual energy and ability in any undertaking whatsoever, rather than a demonstration of opportunities in cotton manufacturing which are open to all alike in New England, yet such success is assuredly proof that no business offers greater or more certain returns for high-class ability and ample means, and likewise that cotton manufacturing, as testified to by Abbott Lawrence even 65 years ago, "is as firmly settled in New England as the raising of potatoes." Furthermore, this firm's operations afford conspicuously decisive evidence, differing only in degree from that found all over New England, that New England could no more spare its cotton industry than New York could part with its banks and its brokers or the South with its cotton agriculture.

Mr. Robert Knight, the surviving brother and founder of the business, remains the active head of the firm today at the age of 78, and it certainly is an eloquent commentary that within the lifetime of a man born on a New England farm and starting without special advantages other than sturdy character a business should have been built up which is without a parallel in the textile world today. Owning 16 mills in Rhode Island and Massachusetts, besides print works and a bleachery, this firm operates 450,000 spindles and 12,000 looms, employing between 9,000 and 10,000 hands, and turning out an annual product worth \$7,500,000. As in the case of Mr. C. D. Borden, president of the Fall River Iron Works, the Knights were first merchants and then manufacturers, another illustration of the fact that ability to market your manufactures, whether they be of calico, newspapers or poetry, is the touchstone of all commercial success. Not necessarily that a good salesman can perpetually make profitable disposition of an essentially inferior product, but rather that a salesman of real ability will sense the public demand and will be promptly and eternally on hand "with the goods."

With the Knights success has undoubtedly come easier and without interruption because they have always made salable goods. The cotton they buy averages strict middling, inch and an eighth Mississippi benders, and, consequently, their goods always have first call in the markets, hard times or good. Their Fruit of the Loom has been a famous brand of muslin sheetings for nearly half a century and is known in every household in the country, and of the 200 different kinds of goods they make—sheetings, shirtings, twills, print goods and cambrics—there are many others hardly less popular.

As a matter of course, sound financial and business management characterize the production of the goods. The Knight mills are equipped with up-to-date machinery, and they are so managed that there are never any labor troubles. They never stop the mills or curtail production, and when hard times come they are always in full operation. It is the settled policy of the firm to make the largest improvements

and the most extensive outlays in times of depression, whereby they are enabled to make a saving equal to the earning capacity of the mills under the most prosperous conditions. They are on their own footing and don't have to be financed. They sell their own goods and carry the accounts of their customers. By marketing their own goods at an expense of not over 1 per cent., they are at an immense advantage over those mills which are not so situated, and whose marketing costs are 2, 3 or more per cent. Again, they are not speculators in cotton. At the beginning of the season they buy a full year's stock of cotton and put it in their storehouses, and then they are mind-free and foot-loose to manufacture and sell their products.

They own 15 villages with large tracts of land, and farms which are run for the benefit of the villages. The real estate has been incorporated, but the mill business remains in the hands of the firm, which is composed of members of the Knight family. While they own a large number of tenements, which, by the way, have from 8,000 to 10,000 feet of ground around them, are kept in good repair and have been remodeled to suit the times, many of the operatives own their own homes and have gained a considerable degree of independence through their savings-bank deposits and investments in building and loan associations, or co-operative banks, as they are called up here. All the testimony is that these people are a well-dressed, well-appearing and contented lot, and, indeed, the declaration is frequently made to me that no class of labor anywhere is more prosperous as a whole than are the operatives of New England.

In connection with the village system which applies generally to the Knights, careful students of conditions here have called my attention to the advantages which this system possesses over that of city manufacturing centers as something worthy of serious consideration by Southern mill men, and have taken Fall River as an example of the baneful effects of concentration. With two or three exceptions, the Knight mills are all located in villages. The help is the same stock as that elsewhere—Canadian-French, Italians, Swedes, Irish and English, mostly—and yet the management never hears of unions and troubles. In Fall River, where there are 41 corporations, owning 92 mills, with over 31,000 operatives, clashes are frequent and the relations between employer and employee are never of an ideal sort. At Fall River the labor leaders concentrate, and it is a perpetual storm-center. Restrictive legislation originates at such centers, and here it is ruthlessly enforced. I am told there is a well-authenticated case of a mill there, the Robison Mills, now the Luther Manufacturing Co., having been haled to court and fined for having exceeded by one-half minute the 58 hours per week in which the Massachusetts statutes permit a mill to run. Against the tyrannies of the labor leaders the operatives themselves are revolting, and although it is practically as much as a man's life is worth to publicly say so—I mean in the way of the persecutions which would follow his attempts to get work again—I have heard of nu-

merous instances where Fall River operatives have expressed a wish to go to some place where the labor leader never comes. While not all the troubles of Fall River may properly be laid to labor agitators, yet the conditions there certainly do suggest that the village plan for factory sites presents many attractive points. There is more confidence there between employer and employed, more respect and a greater disposition to avoid friction and trouble.

However, this may be a somewhat superficial view of the matter as applicable to Fall River conditions today.

As the result of observations made on a visit to Fall River the other day, I am disposed to regard that city as on the firing line in the skirmish between Northern and Southern cotton mills, and thus to contain a broader and more far-reaching significance than can be applied to mere labor disputes. Thus, Fall River appears to be merely the mark and to be somewhat accidentally the place where will develop earliest the result of the competition between the North and the South. The tension was the strongest here because of this being the great center of the cotton-mill industry of New England.

True, the Borden Mills are running, and I have not heard that Matt. Borden is losing any part of his \$15,000,000 in keeping them going, although he does pay the old scale, the one practically all the other mills in Fall River declared they couldn't pay and make any money on. His is hardly a typical case, however, for he enjoys water-front privileges acquired in early days by the Fall River Iron Works and allied interests which he inherited and acquired. He is thus enabled to unload his coal and his cotton at his doors and to ship his goods in the same advantageous way. He prints his own goods and he markets them as well, and he has ample means. So that with economies in freights and in operations, with vast facilities for selling his product and with the elimination of commission and interest accounts, he occupies a position of exceptional advantage. But of the 92 mills in Fall River but 18 are in operation. Six of these belong to the Fall River Iron Works Co., four are departments of the New England Cotton Yarn Co., two constitute a branch of the American Thread Co., two manufacture Marseilles quilts and four make fine colored goods, fine odds and fancies. The other 74 shut down the last of July on the refusal of the operatives to accept a scale of 17.32 cents per cut, a 12½ per cent. reduction, which had been agreed on by the mill men in conference and announced as having been made necessary by the longer hours and cheaper labor of Southern mills whose goods come into competition with their own. It is significant in this connection that out of 3,246,648 spindles in Fall River, only about 500,000 are on fine work, and of the mills in operation there today only the Fall River Iron Works are engaged in making the coarser grades of goods.

Thus it might appear that the whole status of the future of cotton-spinning North and South will be greatly affected by the contest now going on at Fall River. It is not doubted by operatives that if the Fall River mill men gain their point there will be a mark-down to meet that scale in all the New England mills, and for that reason the unions elsewhere are furnishing funds to help the strikers out. On the other hand, by means of strike insurance, if in no other way, the millowners of New England are giving aid and comfort to the closed mills of Fall River.

No one talks of quitting business in Fall River—no more than quitting their wives, if as much, as one man put it to me—but that readjustments are inevitable here everybody recognizes. The introduc-

tion of the warp stop-motion and longer bobbins began some time ago, by which one man can attend to 12 looms instead of eight, and by which the percentage of seconds would be reduced while the product of the loom remains the same. These improvements, with the consequent reduction of some 25 per cent. in the number of weavers to be employed, had unsettled the labor of Fall River at the time the notice of the reduced scale was posted. During the 15 weeks of the strike possibly 15,000 of the 31,000 operatives in Fall River have left the city. Among those remaining there is considerable poverty. A million dollars has been withdrawn from the savings banks, and the number who have applied for State aid is 1500, indicating a population of 6000 or so in a pauperized condition.

The mill men declare their determination to hold out until they win. Conferences are in progress, and it is believed that when the factory doors are opened, as they may be next week, the operatives will come back gradually, if not all at once.

Whether the reduction in wages and the introduction of such improvements as have been determined on will bring conditions satisfactory to the mill men remains to be seen. Over in New Bedford, where they have some of the finest mills in the world, with electric power, the Crompton & Knowles Jacquard looms and the most modern improvements of every sort, you will hear it said that the Fall River mills have got to go considerably further in re-equipment if they want to save their dividends and their glory.

Along this line Mr. George Otis Draper of Hopedale has something of interest to say. "The South some time ago practically monopolized the field for coarse goods," says he, "although several Northern competitors still maintain their rank among the most successful in their locality. The line is no longer drawn at print cloths, which were once considered too fine for Southern manufacture. The North still has the advantage of longer acquaintance with the business, larger supply of skilled labor and nearness to machinery supplies. The South is beginning to get a little overcrowded in certain sections, and the growing scarcity of labor may eventually raise the price of wages to a point which will eliminate one of their present advantages. Looking at the matter from a broad standpoint, there is still quite a field in the finer styles of goods where American manufacturers must defeat foreign rivals. The Northern mill should naturally pre-empt this chance, and the Southern mill will stand ready to fill up the gap as the Northern fabrics grow finer in grade."

ALBERT PHENIX.

A \$500,000 Baking-Powder Factory.

Nashville, Tenn., is to have a large plant for the manufacture of baking powder. This plant will be installed in a four-story building, 50x200 feet, and the equipment of machinery will have a capacity of 10,000 cans daily. About all the machinery required has been purchased, but information regarding automatic packers for weighing and labeling the packages is solicited. The Continental Baking Powder Co. has been incorporated to own and operate the plant, and \$500,000 will be the amount of the investment. Its incorporators are Messrs. William J. Cummins of Nashville, E. C. Goshorn of Cincinnati, Ohio, vice-president, and George Cummins, general manager.

A trainload of cotton containing 1200 bales and valued at \$60,000 was shipped from Oklahoma City, Okla., last week, consigned to the cotton mills at Nagasaki, Japan.

*This series of articles bearing upon New England's industry is intended as an inspiration for the South.

MINERALS OF LOUISIANA.

By JOHN SHARSHALL GRASTY, Johns Hopkins University.

[Written for the Manufacturers' Record.]

Though the State of Louisiana was the first of the Louisiana purchase States to be settled, and was the first to be admitted to the Union, it has been one of the last of these States to take rank as a mineral producer. This, however, is but natural when it is considered that the States to the west of the Mississippi and included within the vast territory purchased from Napoleon owe their development chiefly to their mineral resources. On the other hand, Louisiana's development has been, until recently, entirely along agricultural lines, Louisiana possessing essentially the most agricultural portion of the region. Since the discovery and development within the last few years of its deposits of salt, sulphur and petroleum it cannot, however, longer be called a purely agricultural State. Agriculture, it is true, is the chief industry, and as such is likely to continue; but with the growth of the salt, sulphur and petroleum industries it cannot be said, as in the past, that it is the one and only source of Louisiana's wealth. In the sulphur, salt and petroleum deposits the State possesses a new and important source of wealth, and of a value not dreamed of a decade ago.

At St. Louis Louisiana has a small but appropriate display in the Mines and Metallurgy Building, where the exhibit consists in the main of salt, sulphur and petroleum. On one side the exhibit is enclosed by specimens of rock salt, and is fenced in on another by a wall built of blocks of solid sulphur. The other sides of the space are separated from other exhibits in the one case by a brass railing and in the other by a partition, attached to which are shelves bearing glass jars filled with crude petroleum. Disposed about the exhibit are specimens of lignite, gravel, gypsum, marls, iron ore, limestones and marbles. Within the exhibit is a relief map of the State of Louisiana. This occupies the center of the exhibit, and is designed to show not only the topography, but the geographic position of the various geologic formations that are found within the borders of the State.

The salt deposits of Louisiana have been known and worked for over a century, but only in recent years have they been carefully studied and their true extent and importance discovered. Of the two fields which have been successfully worked, that in the southern part of the State is receiving by far the greater development. Here salt occurs in the Tertiary on the "five islands" in form of rock salt. The largest deposit is, however, on Petit Anse island, where over 500 tons are daily mined. Salt is also mined in large quantities on Belle and Weeks islands, and is found here in exceptional purity. Though none has been discovered, there is every reason to believe that it will also be found when wells or pits are sunk to sufficient depth on Cote Blanche island. The deposits of the "salt islands" is in size, purity and importance third, if not second, to the largest salt deposits of the world.

The salines of Northern Louisiana occurring in the Natchitoches district, of which Natchitoches is the center, are of economic importance, but have only been worked in a desultory way since the Civil War. As far back as the year 1700 the brines of this region were known and worked. Salt was an article of barter with the Natchitoches Indians, who made it many years previous to this by evaporating the salines from wells and salt springs either in kettles or obtained it by solar evaporation. Cheaper methods of

making salt have caused the Natchitoches salt district to be more or less abandoned, though there is a possibility in the future of the industry here being revived.

Another deposit is the one near Anse Le Butte, where beds have, in boring for oil, been penetrated to a depth of over 200 feet. The amount of salt here is of sufficient quantity to supply this country for an indefinite period. It occurs in great purity and can be easily mined. When railroads reach the region it will be of very great value, but until then it must remain practically undeveloped.

From being a State in which oil was not produced in the early part of 1901, Louisiana suddenly became in 1902 the eighth State in the Union in the order of petroleum production. Oil was struck in 1901, and in the following year this State produced 548,617 barrels of petroleum, which averaged 34 cents per barrel, making a total value of \$188,985. And yet oil had been known for 40 years to exist in the State. It was considered of no importance until oil was struck at Beaumont, Texas, in 1901, and this led to the sinking of wells in Louisiana and the subsequent development of the Louisiana field.

The quality of the Louisiana petroleum proved to be about the same as the California product, and it brought about the same price per barrel, but a better price than the Texas petroleum, which averaged for the total sales of 1902 about 22 cents per barrel. The petroleum from all three of these fields, however, is of an inferior grade, but the problem of finding new markets for its consumption and new conditions of transportation has in each case been more or less solved. During the last few years its consumption as fuel has greatly increased, and it is being used extensively in enriching manufactured gas. Especially has it come into use as a locomotive fuel because of its many advantages over coal. It has been shown that its use will add as much as 30 per cent. to the efficiency of the boiler, and, moreover, its weight is only 67 per cent. as much as coal having the same heating capacity. From these tests it appears that with coal costing \$3 per ton a barrel of petroleum should be worth 97 cents as a locomotive fuel. There is no doubt but that each year these low-grade oils will come into greater and greater use as fuel, especially in such engines as use it exclusively, as, for example, the Diesel engine, an account of which appeared in a recent issue of the Manufacturers' Record.

The most interesting and important oil district in Louisiana is in Calcasieu and Acadia parishes. This is known as the Jennings district. The first well of importance was drilled about six miles north-east of Jennings station, in Acadia parish, and another area has been developed 12 miles to the west. In both cases oil was struck in Miocene sands. Storage tanks have been built at both places, and pipe lines have been constructed connecting the oil-producing areas with railroad transportation and with tidewater. Many of the sugar refineries and other manufacturing industries along the coast and the upper Mississippi have accordingly discarded coal and are now using oil for fuel.

In the coastal plain there are striking evidences of the presence of other oil pools. A few words about the coastal plain will make this clear. The coastal plain oil field extends from the vicinity of the Mississippi river in Louisiana, and thence across two-thirds of the State of Texas. Bordering on the Gulf of Mexico, it has a width of

from 50 to 75 miles. The low and almost featureless plain that constitutes this area is marked by occasional low mounds or swells, which are of exceptional importance, inasmuch as they usually indicate the presence of oil, being evidences of conditions favorable for its formation and accumulation. They vary considerably in size. At one extreme are the "salt islands" of Louisiana and High Island, Bell Hill and Dawson Mound of Texas, which are from 40 to 80 feet above the surrounding plane. The other extreme is represented in Texas by such low and barely perceptible swells as Sulphur in Louisiana and Spindletop and Stony Lake in Texas. Experience has shown that these mounds are especially favorable for the accumulation of oil. They do not appear to be due to lateral compression, but to some local force acting vertically and lifting the earth's crust. Many of them occur in the southwestern portion of Louisiana, and from existing conditions in many parts of this section a large increase in the production of petroleum in Louisiana within the next few years is indicated.

In Southwestern Louisiana is one of the richest sulphur mines in the world. The deposit occurs in Calcasieu parish, near Sulphur City, and has a daily output of 500 tons, which will be increased, it is said, to 1500 tons. The abundance of the sulphur here and the cheapness with which it is mined has made it possible for the company operating the mine to compete successfully with the Sicilian sulphur in the European market. It is estimated that this deposit contains over 40,000,000 tons. This estimate is from borings made in different portions of the bed. The origin of the deposit is interesting. It is not of volcanic origin, which is evident from the fact that it occurs in stratified sedimentary rocks in a region remote from volcanic disturbance. It is believed, therefore, that this great bed of sulphur was formed from the breaking up of hydrogen sulphide formed from the decomposition of gypsum or of organic remains. A novel method is resorted to in mining it. Superheated water is forced down a pipe encased in a somewhat larger one. The hot water dissolves the sulphur, and this is forced up through the surrounding pipe. On cooling the molten sulphur solidifies, and is then broken up and shipped to market. The presence of this great bed of sulphur justifies the belief that boring for oil in this region will disclose other valuable sulphur deposits.

Ranking next in importance and value to the salt, sulphur and petroleum deposits are the clays of the State. Louisiana possesses in great abundance and widely distributed good clays suitable for the manufacture of brick of the best quality and common articles of earthenware. In the Grand Gulf Hills white clays are found which will doubtless make excellent pottery. Lignite iron ores, marls, gypsum, sandstone, limestone, marble and gravel occur, but they are of minor economic importance. Investigation of the geology of the State of Louisiana may be divided into three periods: The first from the earliest explorations to the year 1867, the second from 1867 to 1892, and the third from 1892 to the present time.

During the first period the Mississippi river attracted and held the attention of the early explorers, who studied its delta and explored its tributaries (in Louisiana) and mapped both. The presence of lignite and salt deposits were recognized by these early explorers, and their observations are recorded in the periodicals and scientific publications of the day. Prominent among the early investigators was Dr. Richard Harlan, whose paper on "Fossil Bones Found in Early Tertiary Formations of Louisiana," read before the American

Philosophical Society in October, 1832, and later published in the Transactions, was the first systematic contribution to the geology of the State. Sir Charles Lyell published an article "on the Delta and alluvial deposits of the Mississippi and other points in the geology of North America observed in the years 1845, 1846." In this he discusses the yearly advance of the Mississippi Delta into the Gulf, and describes various formations in the State of geologic interest. By far the most serious study, however, of the lower Mississippi in all its bearings was made by Humphreys and Abbott. The hydrography and geology in the whole Mississippi basin are taken into account in order to form a just conclusion regarding the special subjects under consideration. The results of their observations were published in 1861.

The second period opens with a reconnaissance made by Hilgard under the direction of the Smithsonian Institution. This consisted of a trip down the Mississippi and to the central three of the five islands. In this report he reviews the various terranes of the State, mentions the lignitic beds in North Carolina, calls attention to potters' clay occurring in Catahoula parish, and discusses the salines of North Louisiana. Hilgard devoted considerable time to the study of the geology of Louisiana, and the work done by him and Dr. F. V. Hopkins constitute the chief contribution to the geologic knowledge of the State during this period. In 1869 the latter made three trips in Northern Louisiana, and in latter part of the year submitted his first annual report. In this report Dr. Hopkins draws the conclusions which are now accepted as correct as to the origin of the sulphur deposit in Calcasieu parish. This was followed in 1870 by his second report, which is essentially the same as the first, with the exception of a few additions and corrections. The third annual report is devoted almost entirely to the new formation from the Lafayette, or, as he calls it, "drift." Work was also done during this second period by H. M. Edwards, C. G. Forshey, L. C. Johnson of the United States Geological Survey, as well as a number of others whose work was of minor importance.

Since 1892 Dr. Wm. C. Stubbs, head of the State experiment station, has directed the work of the State survey. Gilbert D. Harris is the geologist in charge, and the field work is done by him and his associates. Three reports have been issued covering the field work since 1892. One of these, a preliminary volume, was published in 1892, and one in 1899, and the last in 1902. From these reports it is evident that it is the aim of the survey not only to make a geologic, but also a soil and forestry, survey of the State. Attention is given also to the subterranean waters of the State. The reports are full of information, and the survey deserves no little credit for the work that it has accomplished with its limited means.

Woodworking Plant for South.

The Manufacturers' Record is advised by James Prendergast, 400 Sunset avenue, Syracuse, N. Y., that he has a worthy woodworking enterprise which he is desirous of establishing in the South. This is doubtless an opportunity for commercial organizations devoted to the industrial growth of their section to submit propositions to secure this factory.

The Mexican-American Steamship Co., operating lines between New Orleans, Port Arthur and Galveston and Mexican ports, has let the contract for two new vessels of 2500 tons each and is contemplating extending its service to Gulfport and Mobile.

BALTIMORE'S COAL TRADE.

Exports of Bituminous Promise to Soon Reach 4,000,000 to 5,000,000 Tons Per Year.

The growing importance of Baltimore as a port of coal shipment is emphasized by the extraordinarily large tonnage handled over the Curtis Bay pier of the Baltimore & Ohio Railroad during October. In that month the Consolidation Coal Co. shipped over the pier 54,152 tons and the Fairmont Coal Co. 23,244 tons, making a total of 77,396 tons. These two companies are the largest shippers at that point, and it may be noted that the month's tonnage of the Consolidation was below the normal, while that of the Fairmont was considerably above. October 31 was a record-breaker, as upon that day 15,413 tons of coal were dumped by the two companies at Curtis Bay, the quantity of Fairmont coal then handled being three times as large as that of the Consolidation. Two steamships, one of nearly 6000 tons and another of nearly 5000 tons, were loaded with Fairmont coal, besides a schooner of over 800 tons. The Consolidation coal for the day loaded two barges of 1600 tons each, besides over 500 tons on a steamship.

During the month all of the Fairmont Company's coal, with the exception of about 850 tons, was sent outside of the United States, the small quantity excepted going to Galveston. In addition to this, part of the Consolidation Company's coal was sent to California and Cuba.

While more than 22,000 tons of coal were sent to points outside of the United States by one of these coal companies in a single month, it should be noted that notwithstanding this tendency of the foreign trade to develop, the companies find it more profitable, as a rule, to devote themselves to supplying the demand in this country, as out of a total of from 800,000 to 1,000,000 tons exported by them at Curtis Bay during the year, according to an official, an average of only about 50,000 tons goes to foreign markets, and very little across the ocean. This is because of the fact that whenever the demand for coal abroad has increased there has been a simultaneous enlargement of demand in the United States, making prices more attractive at abroad than at home. The foreign coal shipments from Curtis Bay are mostly to Mexico and Cuba or points in South America.

The prospect of Baltimore's future as a coal port shows that this foreign demand may eventually require much larger shipments, as the character of the coal from the coal fields in Maryland, Northern West Virginia and Southwestern Pennsylvania is such as to commend itself to foreign consumers, and whenever there is a shortage abroad there has been a demand for it. Baltimore's proximity to the George's Creek coal region, where some of the best grades of bituminous are mined, is another material factor for advancing her importance in the coal trade. She is very much nearer the coal regions on the Baltimore & Ohio line than is Philadelphia to the soft-coal mines on the Pennsylvania line; in fact, Baltimore is as near, if not a trifle nearer the great Clearfield region than is Philadelphia, notwithstanding that that city is the principal shipping point for soft coal over the Pennsylvania Railroad.

It must be borne in mind that great as is the tonnage handled over the Baltimore & Ohio pier, which was erected during President Cowen's administration for the very purpose of developing a great coal traffic, there is also a large amount of coastwise coal handled at the piers on the Pennsylvania road on the other side of the harbor, although the private piers at Locust Point, on the Baltimore & Ohio, formerly so active, are now devoted to the

handling of coal destined to points on the Chesapeake bay and to points in Baltimore harbor, including bunker coal; that is, coal destined to serve the needs of steamers in port.

The Western Maryland Railroad Co. promises, in connection with the West Virginia Central, which it now controls, to add to the coal shipments out of Baltimore harbor a much greater tonnage than is now handled. Vice-President Landstreet has declared that the company will, as soon as the Cherry Run and Cumberland extension is completed, throw all the West Virginia Central's coal traffic to Baltimore, and a large coal pier is now being erected at Port Covington, on the south side of the city of Baltimore, for the purpose of handling this coal, which, as stated by the officials of the company, amounts to 2,000,000 tons per year.

With this great amount of fuel from the Western Maryland and the prospective increase of shipments over the Baltimore & Ohio, and possibly over the Pennsylvania line, there will within a comparatively short time, perhaps within five years, be shipped through the port of Baltimore from 4,000,000 to 5,000,000 tons of soft coal per annum.

TWO WATER-POWER PROJECTS.

Increased Interest in Development For Electric Purposes.

Articles of incorporation were filed last week for the Broad River Light & Power Co., particulars of which can now be presented. The enterprise is for the development of 10,000 minimum horse-power by means of a dam and a canal. This water-power will generate electricity to be transmitted for the use of the cotton mills in Union and Spartanburg counties, and will greatly reduce the operating expenses of the mills. The plant will be located at Gravel Shoals on the Broad river, below Union, and approximately 40 miles of transmission lines will be built, the total capacity to be 15,000 horse-power. The dam will be 10 feet above water-level and 1000 feet long. The canal will be about one and a half miles long, and it is proposed to connect it with the power-house by four steel flumes. The power-house will be built for eight 1500-three-phase machines, with transformer house to correspond; total amount to be invested, \$1,000,000. The engineer in charge of the work is Gadsden E. Shand of Columbia, S. C. The company's officers are: President, P. J. Balaguer; vice-president, E. W. Wynne; secretary-treasurer, F. K. Myers; counsel, M. Rutledge Rivers; directors, Messrs. J. L. David, W. G. Green, M. V. Haselden, D. Van Smith, A. B. Kugler, J. Lamb Perry, J. H. Dingle, E. W. Wynne and P. J. Balaguer, all of Charleston, S. C., and Macbeth Young of Union, S. C.

There has been a decided increase recently in the movement for developing Southern water-powers, as noted in the Manufacturers' Record. The latest enterprise of this character is reported from Walhalla, S. C., where the Oconee Water, Light & Power Co. was incorporated last week with a capital stock of \$125,000. This company will build water-works and lighting plant, and its development of power will be transmitted by electricity for the operation of cotton mills. About 700 horse-power will be transmitted from the site of the developments, seven miles from Walhalla. A 150,000-gallon stand-pipe, six miles of six and ten-inch pipe, etc., will be required. The electric plant will supply about 50 arc lights and 2000 incandescent lights. New York capital will be largely interested. The incorporators of the company are Messrs. James Thompson and William J. Stribling of Walhalla and W. B. Frink of New York city.

OUR MINERAL PRODUCTS.

Total Value of the Whole Output in 1903.

In 10 years the total value of the mineral products of the United States increased from \$527,097,279 to \$1,419,721,569. Of the total output in 1903 \$624,318,008 represented metallic products, \$794,403,561 non-metallic products and \$1,000,000 unspecified. The chart just issued by the United States Geological Survey itemizing the products gives the following values: Coal \$503,724,381, of which \$351,687,933 was bituminous coal; pig-iron \$344,350,000, copper \$91,506,006, silver \$70,206,060, stone \$67,960,468, natural gas \$35,815,360, cement \$31,931,341, lead \$23,520,000, zinc \$16,717,995, brick clay \$15,000,000, mineral waters \$9,041,078, limestone for iron flux \$5,432,732, phosphate rock \$5,319,294, salt \$5,286,988, zinc white \$4,801,718, gypsum \$3,792,943, clay \$2,649,042, aluminum \$2,284,900, quicksilver, \$1,544,934, sulphur and pyrites \$1,100,818, asphaltum \$1,005,446.

Products representing less than \$1,000,000 each were: Glass sand \$855,828, grindstones \$721,446, mineral paints \$646,220, borax \$661,400, antimony \$548,433, fibrous talc \$421,600, talc and soapstone, \$418,400, oilstones \$366,857, precious stones \$321,400, feldspar \$256,733, cobalt oxide \$228,000, graphite \$225,554, fluorspar \$213,617, fuller's earth \$190,277, bauxite \$171,306, bromine \$167,580, flint \$156,947, barytes \$152,150, abrasive garnet \$132,500, crystalline quartz \$76,908, infusorial earth and tripoli \$76,273, monazite \$64,630, corundum and emery \$64,102, mica \$59,118, millstones \$52,552, nickel \$45,900, arsenious oxide \$36,696, manganese ore \$25,335, lithium \$23,425, marls \$22,521, asbestos \$16,760, magnesite \$10,595, uranium and vanadium \$5625, pumicestone \$2665, chromic iron ore \$2250, platinum \$2080 and zircon \$570.

No metallic tin was produced, but about 20 short tons of high-grade concentrates were shipped to England from South Carolina.

Copper Deposits in Georgia.

Copper minerals have been found in greater or less quantity at a large number of localities in Georgia. A brief resume of these occurrences is given by Mr. Walter Harvey Weed of the United States Geological Survey in the recent bulletin (No. 225) entitled "Contributions to Economic Geology, 1903."

About 30 years ago several deposits of pyrrhotite carrying chalcopyrite were worked in the southern extension of the Ducktown (Tenn.) copper belt. Upon the exhaustion of the rich black sulphide and oxide ores these properties were abandoned, and no work has been done on them in recent years. The records show that the ore bodies are somewhat smaller than those farther north, but the grade and the mineral character of the ore are the same, so that there is a possibility that these deposits may prove to be of economic value.

In the Dahlonega district the gold veins have long been known to contain occasional bunches of copper ore, but so far as known none of these veins offer any prospect of becoming copper producers. On the other hand, a well-marked vein occurring about six miles east of Dahlonega contains a large mass of pyrite carrying an average of 3 per cent. of copper. This property is actively developed and promises to become an important producer of pyrite, which will be used in the manufacture not only of sulphuric acid, but also of copper. From the sinter left after the

ore has been roasted the copper will be extracted.

Another deposit of copper ore occurs at Villa Rica, Carroll county, Georgia, where pyrite containing copper is mined.

For the last three years development work has been in progress upon an old gold property in Lincoln county. This property, which was formerly known as the Magruder gold mine, is now called the Seminole copper mine. It has already yielded high-grade mattes containing gold and silver values, and the development work is sufficient to give assurance of the permanence of the ore.

Increased Mining Development South.

Mr. J. E. Black, vice-president of the Georgia Gold Mines Co., Equitable Building, Atlanta, Ga., in a letter to the Manufacturers' Record, says:

"Knowing that your publication is the representative paper of the South, and that, naturally, men of means and seeking investment would come to you for your opinion as to the conditions in this section, I desire to call your attention to the large amount of development that is being prosecuted in Southern gold and copper mines.

"The past year has seen a large influx of mining men, principally from the West, to this section, many of whom have made investments and are now engaged in opening up the minerals of this belt. In most instances the properties are being equipped with good plants of machinery for hoisting, and gradually and surely stamp mills are being erected to take care of the low-grade ores as development progresses.

"A market for the mill product, being concentrates, and for the selected or high-grades ores is needed badly, and each month's development only adds to the necessity of a smelting plant for this section.

"I am interested in a gold property upon which we have a 40-stamp mill, and we cannot ship to New Jersey our concentrates and selected ore with any degree of profit on account of the high freight rates and smelting charges exacted. Our company is only one of many along the Southern mineral belt in the States of North Carolina, South Carolina, Georgia and Alabama which find themselves confronted with this condition. I believe that a very profitable smelting business could be established, and one that would grow from year to year.

"Kindly make note of this condition, and you may be able to do the South a valuable service."

Gas Engines for Cheap Power.

The question of cheap power is before the country as one of the vital factors in all industrial affairs, and a prominent engineer of the Power & Mining Machinery Co. makes the following interesting statements concerning the economies of gas-generating plants as compared with steam plants.

"The yearly records of 11 electric-power stations, each serving a population of 5000 or less, and of 45 stations, each serving 5000 or more, show:

The average B. H. P. developed.....	1235
The average coal consumption per B. H. P. hour.....	5.5 lbs.
Cost of coal per ton.....	\$4.30

Cost of fuel in steam plant (operating 10 hours per day):	
33.96 tons coal at \$4.30.....	\$146.02
Cost of fuel with our gas engines and producers:	
7.72 tons coal at \$4.30.....	33.19

Saving per day.....	\$112.83
Annual savings (365 days at \$112.83).....	\$41,182.95

"A saving of over 77 per cent. for fuel alone, paying practically 11 per cent. on the average capital invested in the above 56 plants.

"The yearly record of six power stations of one of the largest street-railway systems in America shows an average out-

put of 15,610,934 B. H. P. hours per annum with a coal consumption of 2.9 pounds per B. H. P. hour. With our system we guarantee to develop this power with a coal consumption not to exceed one and one-quarter pounds per B. H. P. or, with coal at \$3 per ton, to make a saving of practically \$38,600 per annum on each station, or a grand total of \$232,000.

"Our producers work on hard or soft coal, wood or coke, changes from one to the other being made without interruption—a good feature sometimes; during a coal strike, for instance.

"We are building in our own shops the well-known Crossley gas engine in all sizes and for all purposes. Over 55,000 of these engines are in operation.

"We are designing and building plants, including producers and gas engines, guaranteeing, with good anthracite or bituminous coal, one pound per brake horse-power hour."

National Irrigation Congress.

The National Irrigation Congress will meet at El Paso, Texas, next week, and 8000 invitations to attend it have been issued. Delegates are expected from Mexico, as well as from a majority of the States of the West and Southwest, and interesting papers are promised in the section of forestry, production by irrigation, engineering and mechanics, climatology and rural settlement. The executive officers of the congress are: President, W. A. Clark, Butte, Mont.; vice-presidents, L. W. Shrutliff, Ogden, Utah; W. C. Johnson, Denver, Col.; John Hall, Lampasas Springs, Texas; secretary, H. B. Maxson, Reno, Nev. The committee of arrangements at El Paso are Messrs. W. W. Turney, chairman; A. W. Gifford, secretary; Alfred Courchesne, J. R. Harper, Francisco Mallen, John W. Fisher, E. Kohlberg and E. C. Pew, Sr. The chairman of the several sections are Gifford Pinchot, forestry; I. D. O'Donnell, E. Benjamin Andrews and Herbert Myrick, production by irrigation; Frederick H. Newell, engineering and mechanics; Willis L. Moore, climatology, and William E. Smythe, rural settlement. Among the formal papers will be "Irrigation of Public Lands in Texas," by Dr. William B. Phillips of the University of Texas; "Production of Grasses and Forage Crops on Irrigated Lands of the West," by W. J. Spillman, national Department of Agriculture; "Crop Rotation by Irrigation," by Prof. Thomas Shaw of St. Paul, Minn.; "But or And," by L. B. Prince of Santa Fe, New Mexico; "Some Relations Which Irrigation Has to Banking," by John W. Springer of Denver, Col.; "The Date Palm and Its Utilization in America," by Prof. Walter T. Swingle, national Department of Agriculture; "Size of an Irrigated Farm," by Prof. Thomas H. Means, Washington, D. C.; "Grazing Land Administration in the West," by Prof. R. H. Forbes, Tucson, Ariz.; "Duty and Time of Use of Stored Waters," by John E. Field, Washington, D. C.; "Underground Waters of Southern California," by Prof. W. C. Mendenhall, Washington, D. C.; "River Floods and Water Supply," by E. F. Chandler of South Dakota; "Reclamation Work in Oklahoma," by H. N. Savage; "Water Distribution in Nevada," by A. E. Chandler; "Method of Computing River Gauges," by O. V. P. Stout of the University of Nebraska; "Hondo Project of New Mexico," by W. M. Reed; "The Klamath Project in Oregon and California," by J. B. Lippincott; "Reclamation in South Dakota," by Raymond F. Walter; "Plans for Irrigation of the Rio Grande," by B. N. Hall; "Responsibility for Design of Structure," by George Y. Wisner, and "Missouri River Dams," by H. H. Harrison.

IRON MARKET ADVANCES.

Continuance of the Strength Recently Developed at Birmingham.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., November 8.

The strength reported of late in the iron market continues, and there has been some advance in price after an irregular and erratic course. Prices are now approaching uniformity in values. At the close last week some few sales of No. 2 foundry and soft were made at \$12.50 for prompt delivery and for the first quarter of next year delivery and credited to this week's business; but sales so far this week have been on a basis of \$13 for No. 2 foundry and soft, with some instances of rejection of business because of inability to meet conditions of delivery. One lot of 500 tons soft and an aggregate of 3000 tons of No. 2 foundry was sold by one interest for delivery in the first quarter of 1905. Even \$13.50 was reached, but \$13 is a fair quotation. In some quarters \$14 is asked for No. 2 foundry for the second quarter of 1905, and gossip reports sales. Some No. 1 foundry sold at \$13.50, as did also No. 1 soft for first quarter of 1905. The difference between grades is irregular. In some cases it is 25 cents, while in others it is 50 cents. There is a very respectable number of buyers in the market at \$12.50 for No. 2 foundry. They are turned down, as any seller on the market can get \$13 for his offerings. No. 4 foundry is pegged at \$12 and gray forge in close proximity. The demand is greater than the sellers' inclination to supply.

There seems to be trouble brewing between the striking miners and the commercial coal operators as to an increase in mining wages, and the miners announce their intention to contend for it owing to the advance in the price of iron. If the commercial operators resist, a new element of discord will come in to complicate the situation and make it more uncertain. The furnace interests still assert that they are making constant headway toward normal conditions, and maintain that they will soon be entirely free from the dictations of the Order of United Mine Workers. The latter don't talk that way, and the furnaces are receiving daily accessions from the ranks. The outlook is mixed. J. M. K.

[Special Dispatch to Manufacturers' Record.]

Birmingham, Ala., November 9.

The market remains very firm, with sales limited to sellers' convenience. One thousand tons No. 2 soft went at \$13 for first quarter of 1905. There were sales of other grades on this basis, but none of magnitude. The general opinion of the trade is that prices may work up to \$15 for No. 2 foundry, but no one desires it to advance further. The firmness is due to the situation in iron, and election results cut no figure in prices. They were anticipated and discounted. The Sloss-Sheffield Company has advanced its wage scale to its coal miners to 47½ cents per ton, with every prospect of further advance in the near future. Others will follow this action to the benefit of their interests. J. M. K.

Kentucky-Tennessee Oil Fields.

[Special Cor. Manufacturers' Record.]
Barbourville, Ky., November 7.

Conditions under which oil operations have been carried on in the Kentucky and Tennessee fields during the past few weeks have been rather unfavorable, but in spite of retarding features a pretty fair average has been maintained. The October record of completions shows a slight increase over the record of the preceding month, and the runs have increased over 25,000 barrels in the same length of time. The rains of the past few days have sent

many idle rigs to bouncing, and with the breaking of the drouth that has seriously hampered drilling all during the summer months the record of the present month will no doubt excel those of the two preceding months. The number of rigs in operation in all the divisions is now placed at 150. A considerable number have been out of commission as a result of a scarcity of water, and not because there was no demand for contractors.

During the first week of November the lower fields have turned out a number of excellent strikes. All along the Kentucky-Tennessee line in the lower fields scattered drilling is under way and contractors are doing a rushing business. Many contracts for new drilling have been made during a week past, two of which call for the drilling of a dozen test wells in Pulaski county adjoining the Wayne division.

Twenty-five rigs are now in operation in the Cumberland county fields and many new wells are being drilled.

Last week the Standard Oil Co. finished its pipe-line extension into the Wolfe county developments, adjoining those of Estill county, and the production of that field will be added to the Kentucky-Tennessee runs.

The heavier grade of oil is now commanding \$1.01 per barrel, while 66 cents is quoted on the lighter grade. Better prices are expected during the winter. Last winter the lighter grade reached \$1.25 per barrel. W. S. HUDSON.

Steel Castings in Birmingham.

The Birmingham Steel & Iron Co., manufacturers of open-hearth steel castings and general founders and machinists at Birmingham, Ala., began making steel castings the latter part of September, and have fully demonstrated that solid castings can be made by the basic open-hearth process from Southern iron. Physically and chemically the castings are entirely satisfactory. This concern is prepared to execute orders for castings of all sizes and descriptions to 10 tons in weight. They have made some heavy castings for the Cuban sugar-mill trade. This is said to be the only concern in the South that makes steel castings for the general trade, which has supplied a long-felt want in that territory. This company made a reputation by being successful in casting Vulcan, now on exhibit at the World's Fair at St. Louis, which is the largest cast-iron statue in the world. The officers of the company are J. R. McWane, president; W. T. Adams, vice-president; J. M. Johnston, secretary, and J. R. McWane, treasurer.

Literary Notes.

Annual Statistical Report of the American Iron and Steel Association. James M. Swank, General Manager, The American Iron and Steel Association, Philadelphia.

This authoritative statistical review of the American iron trade for 1903 embraces all the leading features of previous reports and also many new features. Special attention has been paid in this report to the statistics of our imports and exports of iron and steel, iron ore, manganese ore, coal and coke. Tables are given which show our annual imports of iron and steel and also of tinplates from 1872 to 1903; also our annual exports of iron and steel for the same years. Another table gives our annual imports of iron ore since 1879. The tables relating to our production of pig-iron have been greatly extended. Coal and coke statistics are given in great detail. Full statistics are given of Bessemer, open-hearth, crucible and miscellaneous steel castings. Full details are also given of the shipments of iron ore from the Lake Superior and other mines, the imports of Cuban iron ore, the

prices of Lake Superior iron ore, the tonnage of steel vessels built in 1903 and 1904, immigration in 1903 and previous years, etc. The department of the report which is devoted to prices has been enlarged to embrace the monthly prices of steel bars at Pittsburg in the last seven years and complete and authentic quotations of the monthly prices of tinplates during the last few years; also prices of beams, channels and steel plates in recent years. Tables showing the prices of Bessemer rails in this country and in Great Britain for a long series of years, and also showing the miles of railroad in operation in the United States since 1830 and the displacement of iron rails by steel rails since 1880, will be found valuable for reference by railroad men. Tables showing the production of leading iron and steel products, iron ore, etc., by the United States Steel Corporation and independent companies in 1902 and 1903 are also given. Canadian iron and steel statistics, compiled from reports made by the manufacturers to the American Iron and Steel Association, are full and complete. The report closes with statistical tables of the world's production of iron and steel and iron ore and coal in the latest years for which statistics have been received. The necrological record is continued for 1903 and 1904. The report contains 94 pages and is well printed on good paper. It will be sent by mail in a strong flat envelope to all who may order it, thus insuring its receipt in perfect condition.

James Sprunt Monograph No. 5, published by the University of North Carolina under the enthusiastic and able editorship of Dr. Kemp P. Battle, contains the minutes of the Kehukee Association of the Primitive Baptists, 1769-1777. The minutes contain the record of the organization of the association, its rules and lists of members and officers, and there is also an account of the meeting subsequent to 1777. The original was carried to Tennessee by Joel Fort, a member, and a copy was given by his descendant, Mr. Joel B. Fort, a lawyer in that State, to Dr. H. B. Battle, who transferred it to the university. From this publication may be seen the names of the leaders of the great Baptist denomination in Eastern North Carolina at a most critical period in our history. The questions on subjects of morals and social conduct, and the frank answers thereto, are of especial importance. A letter from Mr. Joel B. Fort giving the history of the document is published. Dr. Kemp P. Battle has, as in the prior Sprunt Monograph, published an introduction and notes illustrating the text.

Consulting Engineer Wanted.

The services of a consulting engineer are wanted by the Graceville (Fla.) Electric Light & Water Co. This company desires the engineer to assist in planning and building an electric-light plant and water-works system. For full particulars address the Graceville Electric Light & Water Co., Robert J. Boone, secretary, Marianna, Fla.

Asbestos Wanted.

The Manufacturers' Record is in receipt of a request for a good asbestos property in the South. Letters should be addressed to G. M. R., Box 900, New York.

The Mitsui Company, one of the great commercial organizations of Japan, will establish a branch at Oklahoma City to handle cotton from the Territory for Japan.

During the past 10 months charters registered at Chattanooga, Tenn., represent an aggregate capital stock of \$2,369,700.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

TO OPEN A NEW REGION.

Jefferson City, Jerico & Southwestern to Build About 125 Miles of Line.

Mr. W. S. Allison writes from Eldorado Springs, Mo., to the Manufacturers' Record concerning the Jefferson City, Jerico & Southwestern Railway Co., recently incorporated by him and others. He says that he planned the route and that J. C. Long of Little Rock, Ark., made the preliminary survey between Lamar and Jerico last May. The line was chartered on June 4 as the Jerico & Southwestern, but immediately thereafter those interested were encouraged to consider building a longer line from Eldon to Minden, and accordingly a charter for the Jefferson City, Jerico & Southwestern was issued on September 23 covering approximately 125 miles of line through Barton, Cedar, Camden, Dade, Hickory, Morgan, Miller and Polk counties. The incorporators are J. C. Long of Little Rock, Ark.; W. S. Allison of Eldorado Springs, Mo.; Robert E. Collins, Edwin R. Chappell and John B. Meyers of St. Louis. The company is capitalized at \$1,250,000.

The survey has been made by J. C. Long, and the J. A. Ware Construction Co., Houser Building, St. Louis, Mo., are the contractors. J. F. Refike has set the grade stakes for the builders on the first 20 miles, and work is to begin early this month. A connection will be made between Lamar and Jerico Springs, Mo., to give that health resort transportation facilities; then the work will proceed from Eldon on the Missouri Pacific and Rock Island railroads southwest of Jefferson City, through Miller, Morgan, Camden, Hickory, Polk and Cedar counties to intersect the work now under way in Cedar, Dade and Barton counties, and at Lamar to again connect with the Missouri Pacific and the Frisco railroads, duplicating this connection at Minden at a later date, as both railroads are also there.

The territory to be traversed consists of the Ozark foothills, with their waterways, among which the Osage, Pomme de Terre and Sac rivers are most prominent, with fine stretches of prairie intervening, the line terminating in a wide extent of prairie in the last 45 miles in Cedar and Barton counties, this track being broken only by Horse creek and the north fork of Spring river.

The line runs northeast and southwest, and is deemed susceptible of a low grade, though it crosses several streams and their watersheds. It will prove a triumph of engineering in point of a happy division of territory between existing systems, though part of the route is half mountainous and the principal streams are crossed instead of being followed. Correspondence relative to construction matter should be addressed to J. A. Ware at St. Louis, while Mr. Allison at Eldorado Springs, Mo., will endeavor to answer inquiries concerning the attractive features along the route.

Railroads in the United States.

Advance sheets of Poor's Manual for 1904 have been issued giving complete figures for railroads in the United States up to the end of 1903. This shows that the total length of line completed on December 31, 1903, was 207,603.53 miles. This was a net increase of 4774.61 miles during the calendar year. The total liabilities of all railroads amounted to \$14,934,908,686, divided as follows: Capital \$6,355,207,335, funded debt \$6,722,216,517, unfunded debt \$448,199,448, current accounts \$648,434,976, sinking and other

funds \$115,201,683, profit and loss \$645,648,727. The total assets, amounting to the same as the liabilities, are divided as follows: Cost of railroads and equipment \$11,233,311,285, investments \$2,653,851,625, other assets \$552,036,399, current accounts \$422,912,234, profit and loss \$72,797,143.

Reports were received covering earnings on 205,237.12 miles of line; total traffic revenue \$1,908,857,826, of which \$428,723,240 were from passengers and \$1,337,706,786 were from freight. There were also \$129,956,962 from other sources, and \$12,470,838, the sources of which (passenger, freight or otherwise) were not classified in the returns; total operating expenses \$1,316,349,314, net earnings \$592,508,512, other receipts \$89,485,484, total available revenue \$681,993,996. Payments were made from the available revenue as follows: Interest on bonds \$239,426,707, other interest \$8,680,451, dividends \$164,549,147, rentals (interest \$38,675,121, dividends \$26,125,268, miscellaneous \$21,320,600) \$86,120,989, miscellaneous \$61,336,614; total payments from available revenue, \$560,113,908; balance, surplus over fixed charges and miscellaneous payments, \$121,880,088.

The number of passengers carried on 204,725.37 miles of railroad, that being the mileage covered by lines furnishing complete returns, were 696,927,045, the passenger mileage was 20,895,582,855, the tons of freight moved numbered 1,299,684,081, the tons of freight moved one mile numbered 171,290,310,685; the total revenue train mileage was 998,545,812, divided as follows: Passenger trains 429,014,116, freight trains 574,326,409, mixed trains 22,205,287.

FRISCO TO NEW ORLEANS.

Chalmette Terminal and New Depot Plans Approved by President Davidson.

A report from New Orleans states that President A. J. Davidson of the St. Louis & San Francisco Railroad has approved the plans for the Chalmette terminals in that city, and also for the new depot there. Furthermore, that he has authorized Mr. J. F. Hinckley, chief engineer, to invite bids for the construction of the river slip at Chalmette, which in itself will cost nearly \$2,000,000. This slip will be 1600 feet long and 400 feet wide, with 30 feet depth of water at low tide. It will accommodate nine vessels. The walls will be of concrete, 50 feet high, resting on piles 40 feet long. It is stated that construction will be pushed as fast as possible.

The new depot plans were also approved by President Davidson, but the first passengers to come in over the Frisco will, it is stated, arrive at the Northeastern depot. It is expected that trains will be running into the city by December 15 or January 1. The trains will at first come in via Tupelo, Miss., but later on they will come down the west side of the river under traffic arrangement with the Missouri Pacific as soon as the latter's line is completed between Memphis and New Orleans. They will then go from Memphis to Baton Rouge over the Gould lines and from Baton Rouge to New Orleans over the Illinois Central.

Virginia & Southeastern.

According to a report from Bristol, Va., Tenn., the Virginia & Southeastern Railway Co., lately incorporated in Virginia by Henry K. McHarg, president of the Virginia Iron, Coal & Coke Co., and also of the Virginia & Southwestern Railway, will secure the property of the latter and build its proposed line to mineral lands in Southwestern Virginia owned by the Iron, Coal & Coke Company. The latter and the existing railway, the Virginia & Southwestern, are already intimately connected.

The charter of the new company permits it to build from 30 to 500 miles of line, but as yet the projectors thereof have disclosed nothing further. Mr. Grant B. Schley of Moore & Schley, bankers, New York, who is one of the incorporators, writes the Manufacturers Record that at present no information can be given as to the plans. From Bristol comes the report quoting Mr. John B. Newton, general manager of the Virginia & Southwestern, as saying that he expects that within a few days he will be able to give a statement about the plans of the new company.

It is reported that connection with the Virginia & Southwestern will be made by the new line at Clinchport, Va., about 20 miles from Bristol. The road is to run up into the coal fields of Wise, Dickinson and Lee counties, going from a point near Mendota, Va., through a rich valley in Giles county. The plans, it is said, also contemplate within three years the handling of coal through to tidewater, and there have been rumors that this would be done by connection with the proposed Tidewater Railway, which is reported to be pushing its plans by acquiring rights of way, its agents now being engaged in that work near Salem, Va.

Engines Stalled By Drought.

A dispatch from Mobile to the New York Sun of last Saturday said:

"The drouth in this section of the country has lasted nearly 60 days, and the water has become so scarce that engines of the Louisville & Nashville and Southern railways have been at times stalled on the main line. The railroad officials have announced that never again will the road find itself in the embarrassing situation of not being able to secure water for its engines. The company will bore several wells along the line of the Mobile & Montgomery Division that can furnish water for some time without the aid of a force of pumps."

The waterless, fireless, smokeless locomotive illustrated in the Manufacturers' Record last week, and which is now being built for the Southern Pacific Railroad, would prove a great boon to these railroads suffering for water if available at present.

ATLANTA TO SAVANNAH.

Coast Line Reported to Have Purchased Two More Roads.

The Atlantic Coast Line, in the interest of which the Macon, Dublin & Savannah Railroad has been purchased, giving it a line from Macon, Ga., to Vidalia, Ga., is reported to have also bought the Macon & Birmingham Railroad, extending from Macon to La Grange, and the Atlantic & Florida Railway, from Fort Valley to Atlanta. This, it is stated, will give the company a continuous line from Atlanta to Vidalia, Ga., and that from Vidalia a line will be built to connect with the Plant system for the Atlantic Coast Line at Ways Station, about 15 miles southwest of Savannah. This would require the construction of about 60 miles of new road, which would go via Reidsville.

Savannah, Shiloh Park & Corinth.

Mr. Jeff Ross, one of the incorporators of the Savannah, Shiloh Park & Corinth Railway, writes from Savannah, Tenn., to the Manufacturers' Record that the company, which was recently chartered, has not yet been permanently organized, but the road is soon to be pushed to completion. The line proposed is from Corinth to Shiloh Park, 18 miles; to Pittsburg Landing, four miles; to Savannah, seven miles; to Allen's Creek, 40 miles, making a total distance of about 70 miles from Corinth to Allen's Creek. Engineering difficulties are few and the country to be

opened up is very rich. The line will furnish the only communication by rail to Shiloh Park and will cross the Tennessee river at the head of low-water navigation.

Burnside & Cumberland River.

President C. W. Cole of the Burnside & Cumberland River Railway Co., 21 Wiggins Block, Cincinnati, Ohio, writes the Manufacturers' Record as follows:

"This company has just completed an extension of one mile of track to the water's edge at Burnside, Ky., and established a dock to meet the demand for additional facilities for handling the increased traffic on the Cumberland river. The Burnside & Burkesville Transportation Co. is building at its shipyard at Burnside, Ky., a 300-ton packet and two additional large freight barges. The Burnside & Cumberland River Railway and the Burnside & Burkesville Transportation Co. operate in connection with the Queen & Crescent Route."

Alcolu Railroad Extension.

Mr. R. J. Alderman, president of the Alcolu Railroad Co., writes from Alcolu, S. C., to the Manufacturers' Record:

"We are now constructing three miles of our railroad, which we hope to complete about the 1st of January next. This extension is from the present terminus of our road at Hudsons to Beulah in Florence county, this State. The postoffice at Beulah is known as Bethlehem, and is in the midst of a very flourishing agricultural section. The extension will make the total mileage of the Alcolu Railroad about 25 miles from Alcolu to Beulah."

Later the company will probably build one or two spur tracks.

Birmingham to Mobile.

A dispatch from Birmingham, Ala., says that Col. J. A. Montgomery has begun the survey for the proposed Mobile & Western Alabama Railroad, which is to run from Birmingham through the valleys of the Cahaba and Alabama rivers to Mobile, and that later the line will be built northward from Birmingham to Florence and Huntsville. The Birmingham Commercial Club is displaying much interest in the project. It is further reported, in connection with this enterprise, that a construction company with \$500,000 capital has been organized in New York to build the line.

The New Orleans Belt Line.

Mr. James W. Porch, president pro tem. of the New Orleans Belt Railway Commission, is reported as saying that engineers will be employed to make plans and estimates of the cost of construction. It is proposed to build a double-track line, and it is possible that electricity will be used to operate the road. The line will be about 21 miles long, and it is proposed through it to make all industrial plants around the city connected with the trunk lines, the belt line transferring shipments at nominal charges.

Peach River & Gulf.

The Peach River & Gulf Railway Co. has filed its charter at Austin, Texas, to build a line from Willis, in Montgomery county, Texas, to Beaumont, Texas, 100 miles. The incorporators are A. W. Miller, C. S. Vidor, R. W. Smith, B. I. Sparks, C. H. Moore, M. Stewart, all of Galveston; James G. Berryhill of Des Moines, Iowa; W. S. Slagle, S. A. Lincoln, E. S. Henrich of Alton, Ill.; M. M. Riner of Timber, Texas.

Railroad Notes.

The Raleigh & Cape Fear Railroad of Raleigh, N. C., has filed a mortgage to secure \$30,000 of 6 per cent. equipment and improvement bonds. This will take up two

former mortgages amounting to about \$10,000, and the remainder will be used for improvements.

Announcement is made of the appointment of Mr. R. D. T. Hollowell as commercial agent of the Macon & Birmingham Railway at Nashville, Tenn.

The last of the tunnels on the Seaboard Air Line's Birmingham extension is reported bored through, and the track from Atlanta to Birmingham is said to be completed with the exception of five miles, including the tunnel. It is expected that the line will be finished by December 1.

The Richmond works of the American Locomotive Co. has, according to a dispatch from that city, been awarded a contract to build 20 engines for the Chesapeake & Ohio Railway, and it will also build five locomotives for the Richmond, Fredericksburg & Potomac Railway.

Cement Output of 1903.

The total production of hydraulic cement in the United States in 1903 was 29,890,140 barrels, valued at \$31,931,341, an increase of 4,145,636 barrels in quantity and of \$6,564,961 in value, as compared with 25,753,504 barrels, valued at \$25,366,380, produced in 1902.

Of the total production in 1903, 22,342,973 barrels, having a value of \$27,713,319, were Portland cement.

The production of natural-rock cement was 7,030,271 barrels, valued at \$3,675,520. This was a decrease in quantity of 1,014,034 barrels and in value of \$401,110, as compared with 8,044,305 barrels, valued at \$4,076,630, the production of 1902.

The production of pozzuolana or slag cement was 525,896 barrels, valued at \$542,502.

An interesting detailed account is given by States of the Portland cement, the natural-rock cement, and the slag cement industries. The number of Portland cement works in the country during 1903 was 78. New York had 12; Lehigh and Northampton counties, Pennsylvania, 13; New Jersey, 3; Ohio, 8; Michigan, 13; other sections, 29. As a producer of Portland cement Pennsylvania is still in the lead by more than 7,000,000 barrels; New Jersey holds second place, as in the preceding year; Michigan ranks third, although one of her large factories was closed for a time while the machinery was changed so as to allow the substitution of the dry process of manufacture for the wet process previously used. Portland cement is produced in 19 States.

Natural-rock cement was produced in 14 States during 1903. As New York is the original home of the cement industry, it seems fitting that it should, by right of discovery, continue to maintain the leadership in the production of natural-rock cement. Second in amount of production of natural-rock cement is the Louisville district, which lies in Indiana and Kentucky. Pennsylvania, which stands first as a producer of Portland cement, ranks third in the production of natural-rock cement.

During 1903 six States contributed to the total quantity of slag cement manufactured in the United States. These were Alabama, Illinois, Maryland, New Jersey, Ohio and Pennsylvania.

The report, which was prepared by L. L. Kimball, makes mention of the cement industry in Canada and Germany, and closes with detailed notes on Portland cement in Michigan, 1903. The report is published as an extract from the survey's forthcoming volume, "Mineral Resources of the United States, 1903," and may be obtained on application to the director of the United States Geological Survey, Washington, D. C.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

COTTON IN CUBA.

Experiments in Raising the Staple on the Island.

P. D. De Pool, Cuba 76 Y 78, Havana, Cuba, writes to the Manufacturers' Record as follows:

"Complying with your wishes about information on the raising of cotton in Cuba and its future, I beg to say that cotton has been grown in Cuba before the war with an average result as a paying crop, for neither the political situation of that period nor the experience of most of the undertakers brought the industry close enough to complete success.

"The climate of the island is so mild all the year round, and so many Americans come here every year to buy land, finding that cotton grew wild in this country, some resolved at first to try a hand with small lots of land, and others followed suit later sowing in larger scale, although not large enough to make Cuba appear as a cotton-producing country.

"The experiment made thus by the Americans gave good results so far as production and quality were concerned, as samples of the cotton of the island have been taken to the States by our progressive Minister Squiers and woven in very fine cloth.

"Elated by the results of the first trials, other Americans have continued to sow cotton, some as a principal crop and others as an addition to their vegetable business, but up to now not in the large scale that will make the raising of that staple a success, although there are companies formed to plant it on a large scale.

"My opinion of the fact that cotton has not been largely planted in the island is that planters find out that it pays them quicker to raise a crop of vegetables for shipment to the States than to wait longer for the cotton and have to contend with the insects and lack of intelligent workers in the cotton field.

"The natural enemy of the cotton, the boll-weevil, has been found in the Cuban field, but as, according to the valuable opinion of Professor Earle, director of the agricultural experiment station of the republic, this insect is believed to be a native of Cuba, and it is hoped that its natural enemy and destroyer will be found on the same field, there are good reasons to make believe that in its own country and with its natural enemy it will not be so destructive as in the States, where it has been imported alone and the enemy left behind. To make sure of the ravages that these insects may make to this year's crop, Professor Earle recommends to prospective planters to wait until its effects have been found out this year, in which cotton has been sown in larger scale than ever.

"Land is very cheap in Cuba. Good arable land around the principal cities is to be had for \$10 to \$20 per acre, and timber land, the valuable wood of which will more than pay for the clearance, is to be had from \$2 to \$5 an acre, sometimes with ports belonging to the tract or rivers that can be navigated to the nearest ports.

"All this, combined with the salty air that predominates in the island and that makes the better kind of cotton more suit-

able for this soil, helps to make this island every day more desirable for large cotton fields, and, according to the enthusiasm of the American planter, who is more and more extending himself over the whole island, the future of this staple is nearly assured."

Mr. James A. Townsend, a machinist of the Cameron-Barkley Company of Charleston, left last Saturday for Banes, Cuba, where he will erect a gin for Sea Island cotton.

More Mills in the South by New England Capital.

It is probable that two new textile manufacturing plants will be located in the South in the near future by New England capitalists and cotton manufacturers. The incorporation for this purpose is reported of two new companies at Providence, R. I. The Southwestern Cotton Mills has been chartered with a capital stock of \$100,000, and its plant will probably be located in Arkansas. The Nashawena Silk Mills has been incorporated with capital stock of \$125,000, and its location has not been chosen, but if it is not located in the South, probably another mill will be built at some favorable location to be selected in the future. It is likely to be a spinning mill, operating within the cotton belt, and the product probably to be woven in the North. These companies were incorporated by Arthur S. Phillips of Phillips & Fuller, 22 Bedford street, Fall River, Mass.; W. B. Edgar, also of Fall River, and Raymond D. Borden of Taunton, Mass.

The Cotton Movement.

According to Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight during the first two months of this season was 3,757,787 bales, an increase over the same period last year of 1,050,359 bales; the exports were 1,998,513 bales, an increase of 589,763 bales; takings by Northern spinners 386,026 bales, an increase of 106,713; by Southern spinners 428,681 bales, an increase of 64,619 bales. In the 65 days up to November 4 the amount brought into sight was 4,115,589, an increase of 1,087,477 bales; the exports were 2,065,304 bales, an increase of 574,143; takings by Northern spinners 445,577 bales, an increase of 123,794; by Southern spinners 459,681 bales, an increase of 64,334 bales.

The High Point Hosiery Mill.

Messrs. J. H. Millis, J. H. Adams, W. H. Ragan, E. M. Arnfield and associates have incorporated the High Point Hosiery Mill of High Point, N. C., with a paid-in capital of \$20,000. They will operate the plant previously announced as to be established by Mr. Millis. All contracts for building and equipment have been awarded. As previously stated, there will be 100 machines for knitting children's ribbed hosiery and apparatus for dyeing this product. The mill structure is two stories high, 60x100 and 30x40 feet.

A Silk Mill Contemplated.

Messrs. Plumer & Sons of Passaic, N. J., and New York city have addressed parties at Greensboro, N. C., regarding the advantages of that city as a location for manufacturing enterprises. They represent silk manufacturers who contemplate building a silk mill in the South, and are now about to visit the section with a view of deciding upon the location. There is \$25,000 available for the enterprise.

Textile Notes.

The Lockhart (S. C.) Mills has declared its usual semiannual dividend of 3 per cent.

The Whitney Manufacturing Co., Whit-

ney, S. C., has declared its usual semiannual dividend of 3 per cent.

D. James Winn has obtained control of the Sumter Cotton Mills at Sumter, S. C., and will operate the plant. There are 5128 spindles in position.

The Tifton (Ga.) Knitting Mills was destroyed by fire during the past week. The plant may be rebuilt. It had 53 knitting machines and complement.

The Madisonville (Tenn.) Knitting Mills has been purchased by Thomas H. Johnston, E. T. H. McCroskey, Samuel Johnston and others of Knoxville, Tenn. The plant's capacity will be doubled. Its present equipment is 25 machines.

Messrs. M. H. Christian and W. B. Farrold of Lexington, Ky., and C. C. Johnson of Salt Lick, Ky., have incorporated the Salt Lick Woolen Mills Co. with a capital stock of \$40,000 to build a woolen mill that will give employment to 50 men when completed.

The Geneva Industrial and Improvement Association of Geneva, Ala., is promoting the movement for the establishment of the cotton mill lately mentioned. It is proposed to organize the company with a capital stock of \$50,000, and nearly half that amount has been subscribed in Geneva.

The public sale of the Hillsboro Cotton Mills during the week resulted in their purchase by A. W. Young, for the bondholders, at \$15,000. It stated that a new company will be organized to overhaul the plant and put it in operation. The mill has 2600 spindles and 80 looms. It is located at Hillsboro, Texas.

The Acworth (Ga.) Cotton Manufacturing Co., reported last week as having effected temporary organization, plans to build a 5000-spindle mill for the production of cotton yarns. Over \$35,000 has been subscribed to the capital stock, and when \$50,000 has been subscribed the erection of buildings will be arranged. The machinery will probably not be contracted for until March, 1905. Orlando Awtrey is temporary president.

Lumber Notes.

The Bay Point Mill Co. has been incorporated at Pensacola, with a capital of \$200,000, to conduct a general mill and lumber business.

A Chicago syndicate has purchased 12,000 acres of pine lands in West Alabama and will begin the development of the property next spring.

During October the shipments of the local saw-mills at Lake Charles, La., aggregated 17,078,637 feet of lumber and about 3,000,000 cypress shingles, in addition to 20 carloads of fencing.

The Cotton Belt Lumber Co. of Chicago has purchased the entire holdings of the Blue Lake Lumber Co. of Mississippi, together with 1800 acres of land, 2000 feet of cypress and oak lumber and four miles of railroad.

The Northern Central Railway Co. furnishes the following comparisons of earnings and expenses for the month of September, 1904, and for the nine months ending September 30, 1904, with the same periods of 1903: September, gross earnings, increase \$56,400; expenses, decrease \$49,500; net earnings, increase \$105,900; nine months, gross earnings, decrease \$189,700; expenses, decrease \$211,400; net earnings, increase \$21,700.

A forest congress is to be held at Washington, D. C., January 2-6, under the auspices of the American Forestry Association, to consider the subjects of forests in their relation to lumbering, transportation, mining, irrigation and grazing, and to encourage the conservative handling of timber resources of the country.

MECHANICAL

An Automatic Electric Pump and Receiver.

An accompanying illustration shows a motor-driven triplex boiler-feed pump and receiver with automatic switches and motor starter for automatically draining heating systems and factory apparatus which depend upon a free circulation of steam for their efficiency. By doing this it serves a double purpose—first, it automatically relieves the system of the water of condensation constantly collecting therein, thus insuring a free and unobstructed circulation and incidentally preventing snapping and hammering in the piping, which is in many cases due to entrained water, and, secondly, it automatically delivers this water directly to the boilers without the intervention of tanks or other commonly-used devices. Not only does it relieve the system of a troublesome factor, but it introduces a supply of feed water into the boiler at a temperature impossible otherwise without the use of a special water heater. In modern hotels and apartment-houses machinery should operate with the least possible noise. One of the greatest annoyances is water-hammer in the pipes reaching to every part of the building, but by the use of this pumping outfit such noise is entirely eliminated.

Electric pumps can be installed in locations to which it is impossible to carry any other motive power, and as this pump, by reason of its automatic control, runs only when occasion demands, no special attendance is necessary and the total cost of operation is for current actually used.

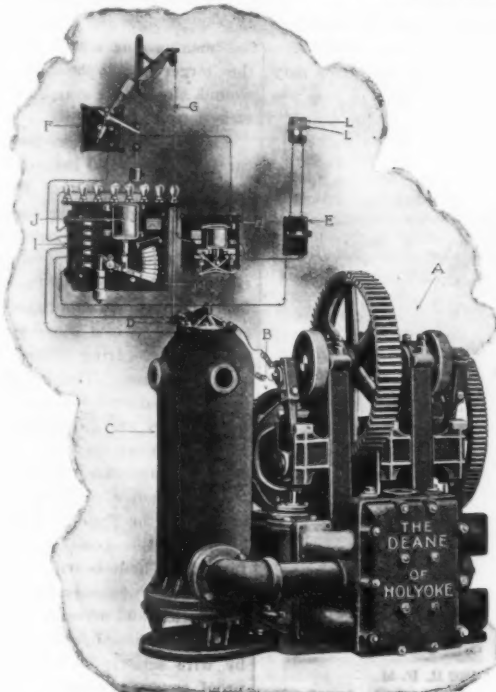
The following description will make the action of the apparatus plain:

A is the pump, B the motor, C the receiver and D a lever operated by a pail-float within the receiver, which rises and falls as the water level changes. E is the main-line switch, which operates by hand and is used to cut out the line when necessary. F is a switch operated by the float in the receiver through the chain and counterweight G. H is the automatic switch which admits current to the motor-starter I when the switch F is thrown in by action of the float. I is the motor-starter which delivers current gradually to the motor and is operated through the solenoid J. K is the fuse block and L the line wires.

The switch E being closed, water in the

with electrical connections and motor as usually installed. The pump may be either single-acting or double-acting, as desired, the arrangement in either case being the same. The receiver is of the vertical form, and consists of a cylindrical closed chamber or tank mounted on a bed-plate secured to the base of the pump, so that the apparatus is compact and self-

and has none of the objectionable features of the closed or ball float. The float is so guided as to hang in the center of the receiver without swinging, and the receiver inlets are provided with hoods to prevent the entering water from interfering with the action of the float. The International Steam Pump Co. of 114 Liberty street, New York, builds this equipment.



AUTOMATIC ELECTRIC PUMP AND RECEIVER.

contained. An opening at the bottom of the receiver is provided with a pipe connection to the suction of the pump, and the water of condensation flows into the receiver through the inlets shown near the top. Three separate inlets are provided for convenience in connecting the returns. The receiver float is of a patented type, and is a simple pail open at the top and hung from a lever having a counterweight so placed as to overbalance the weight of the pail. The pail is kept filled with water, and when the receiver

Ingersoll-Sergeant "Broncho" Channeler.

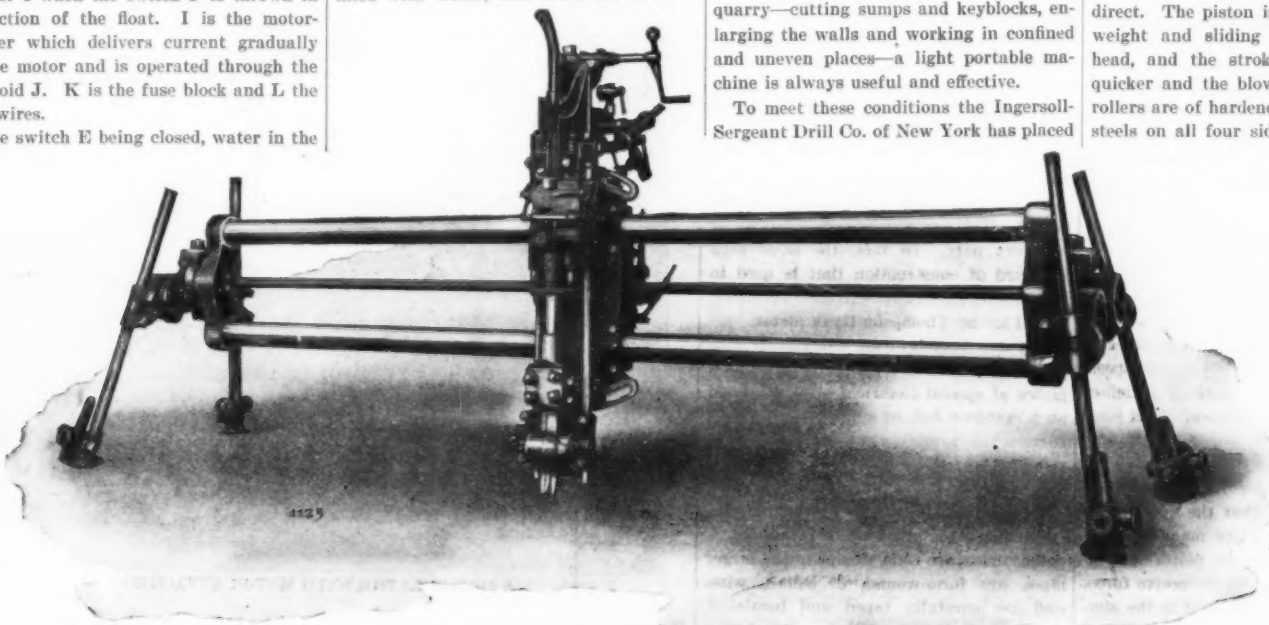
In the quarry processes of today there is a wide field of usefulness for a rock-cutting machine intermediate in its functions between the heavy track channeling machine and the machine drill as applied in the "plug and feather" method of breaking rock. It is often necessary to channel material which has a sharp dip or incline, and there a heavy track channeler is not practicable. In the lighter work of the quarry—cutting sumps and keyblocks, enlarging the walls and working in confined and uneven places—a light portable machine is always useful and effective.

To meet these conditions the Ingersoll-Sergeant Drill Co. of New York has placed

see some resemblance between them and this new machine. But while the "Broncho" is an outgrowth and development of the old bar channeler, its distinctive features of design, operation and construction mark it as an entirely new type of machine.

The frame of the "Broncho" is a structure combining great simplicity and strength. The bars are of heavy pipe rigidly secured in sturdy end castings. Between the bars the heavy steel traveling screw is firmly mounted. The end castings of the frame are swiveled in heavy end pieces to which are joined the connections. Cone-clamp effect is secured at all these joints, and the result is structure of great flexibility and almost universal adjustment, yet of utmost rigidity when pressure is applied. The swing of the legs and their siding in the clamps make a mounting adaptable to any surface or any angle.

The channeling machine proper is in no sense a rock drill, but a heavy cutting engine designed to secure great strength and effectiveness. The cylinder has a diameter of three and one-half inches and a full stroke of six inches, variable down to a minimum of two inches. For starting cuts, working through soft spots and cutting across splits or seams where the full blow is not desirable, a most valuable feature is provided in a cushioning device whereby the blows may be varied from the merest tap to a blow of full power. A feature exclusively used by the Ingersoll-Sergeant Drill Co. is an extended tail rod, being a back piston guide passing through the rear head. This prevents binding or cutting between cylinder and piston, reduces wear on the piston and cylinder walls and assures a free, easy stroke. The tail rod furnishes the motive power for the valve mechanism, which is thus positive and trustworthy in this action. Yet but little power is consumed, since the tail rod serves only to operate a small "pilot" valve, which in turn controls the pressure to throw the main valve. A novelty of design is the omission of the usual crosshead and guides and the substitution of roller guides in which the steels work direct. The piston is thus relieved of the weight and sliding friction of a crosshead, and the stroke is correspondingly quicker and the blow harder. The guide rollers are of hardened steel and guide the steels on all four sides. The roller-guide



INGERSOLL-SERGEANT "BRONCHO" CHANNELER.

receiver rises and throws in the float switch F, thereby turning the current through the automatic switch H, which in turn delivers it to the solenoid J, thus gradually pulling up the lever D and gently starting the pump. As the water is pumped out and the float falls, the operation is reversed and the pump stops.

The illustration shows the standard type of double-acting pump and receiver

is empty the weight of this water causes the pail to hang on its lowest position. As soon as the water rises in the receiver above the pail the weight of the float is immediately reduced to the mere weight of the pail, and the counterweight causes the pail to rise to its highest position and to throw the float switch F to start the pump. This style of float is very simple in construction, sensitive in operation,

on the market its latest type of machine channeler under the distinctive name of "Broncho," perhaps because of its tough, rough-and-ready character, its tireless strength and its facilities of standing up to work under the most severe conditions of service. The appearance of the machine is shown in the accompany illustration. Those familiar with old-fashioned quarry bar or bar channelers will

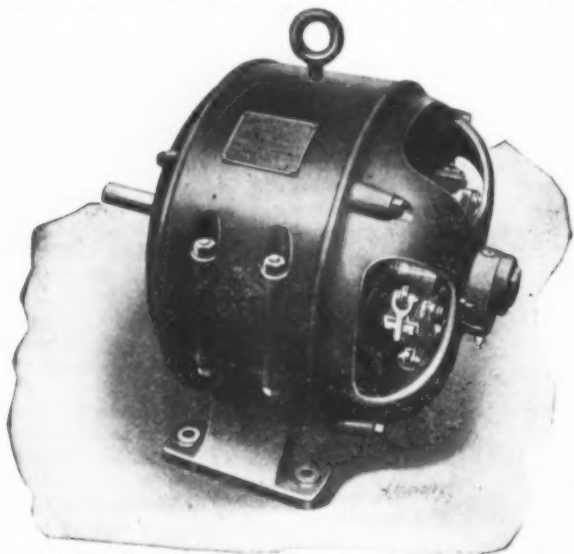
attachment can be removed and the rotation gear thrown in. The drill bit is then inserted in the clamp, and the engine can be used to drill a circular hole. This channeler will both cut an open channel and drill a round hole at any angle from horizontal to vertical. The engine has two rotations—one around the axis of the frame, the other around an axis at right angle to this one.

Vertical feed is provided by a crank on the feed screw. The movement of the cutting engine along the bars is automatically reversed at each end of the travel, and the stops may be set to reverse at any intermediate travel. While the best results with this machine are secured by the use of high-pressure steam or air, the valve motion is such as to secure, with low pressure and wet steam, results superior to those to be obtained with machines of older types under even the best conditions.

The net weight of the "Broncho" chan-

nel to such reaction; second, it builds up and maintains a commutation field of just the right strength for perfect commutation. This commutation field being produced entirely by the balancing coils, is independent of the shunt fields, and, therefore, the latter may be weakened or strengthened at will without interfering with the commutation of the motor.

Armature reaction, being neutralized, does not interfere with nor distort the shunt field, however weak the latter may be. It is, therefore, possible by the use



15-HORSE-POWER MOTOR. SPEED RANGE 450-1800 R. P. M.

neler is about 3000 pounds. It is designed to make a cut of 10 feet 6 inches long to a depth of 12 feet. The capacity varies, of course, with the pressure used and the material cut. The best work is done with a pressure of about 100 pounds at the throttle and cuts 7 to 10 feet deep. It uses about 175 cubic feet of free air per minute, or requires a boiler of 20 to 25 horse-power.

In all, the "Broncho" channeler is characterized by three qualities so distinctive of Ingersoll-Sergeant machinery—economy, reliability and simplicity.

The Thompson-Ryan Variable-Speed Motor.

Builders and users of all classes of machinery, and particularly of machine tools, have for years past been making urgent demands for a variable-speed motor for the direct driving of their machinery. This class of work requires a motor which, throughout a wide range of speed, will have a constant horse-power capacity, and when adjusted for any given speed will maintain that speed approximately for any load. In addition, the motor and controller must be simple in all respects.

The Thompson-Ryan Variable-Speed Motor is offered as an entirely satisfactory solution of the problem of direct electric drive for machine tools and all other machinery requiring a similar speed regulation. It depends for its operation on the well-known fact that the speed of a motor increases when its magnetic field is weakened, provided the motor is supplied with a constant electro-motive force. This method of speed control is the simplest of all known methods and requires no complicated controller.

In the "Thompson-Ryan" motor the difficulties of shunt regulation are all removed by means of a special winding called "balancing coils." This device, which is covered by patents controlled by the Ridgway Dynamo & Engine Co., consists of a stationary winding surrounding the armature of the motor and connected in series with it. This winding has a double effect: First, it neutralizes armature reaction and thoroughly prevents distortion of the magnetic field due

to these coils to increase the speed of the shunt motor not only 50 per cent., but even 20 times this amount, giving a speed range of five to one or even ten to one by weakening the shunt field, and still have the operation of the motor entirely satisfactory even under full load or overload. A motor of this class, when adjusted for any particular speed, will maintain that speed approximately for all loads, which is a condition very necessary for driving machine tools. Since the torque diminishes as the speed increases, the horse-power capacity of such a motor, being the product of the torque by the speed, is constant for all speeds. This also is a condition well suited for driving tools.

Again, since some of the motor losses increase with the speed and others diminish, the efficiency of the motor is practically the same for all speeds.

The details of construction of this motor have been carefully worked out and tested. All the material used is of the best, and good workmanship is apparent in every part. In fact, the same high standard of construction that is used in the Thompson-Ryan dynamo is maintained in the Thompson-Ryan motor.

The armature is of the well-known iron-clad type, the core being built up of thin plates of special electrical steel, mounted on a cast-iron hub or spider. This spider carries the armature core and also the commutator, so that the completed armature is independent of the shaft, which may be removed without interfering with the commutator or armature winding.

The armature coils, except in the larger sizes, are form-wound, of square wire, and are carefully taped and insulated. They are further protected by insulating boxes of oilcloth and fiber placed in the core slots. The coils are held securely in place by means of wedges driven into grooves formed in the top of the slots. No binding wires are used over any part of the armature core. The larger-sized armatures are bar-wound, with the same style of bar-winding in use on the well-known Thompson-Ryan generators for the past 10 years. The shaft is of machinery steel and has journals of generous proportions which run in self-oiling bearings bushed with phosphor-bronze. These

bronze bushings are easily removable in case it should be necessary to replace them. The field ring in the larger sizes is built of two steel castings which carry the pole pieces for the shunt field coils. Inside these pole pieces is a laminated bushing ring upon which the "balancing coils" are wound. These balancing coils, on all motors except those of larger sizes, are form-wound and easily removable from the bushing ring which carries them. In the larger sizes these coils are hand-wound similar to standard dynamo construction.

The field coils are form-wound and carefully taped and insulated, after which a protective winding of hard-laid cotton cord is applied. In the smaller-sized motors the field ring and balancing-coil bushing are combined in a single laminated ring which carries both the balancing and field coils. This laminated field ring is enclosed in a cast-iron case, which also carries the bearing frames and the feet for the motor. The bearing frames of both the cast-steel field and the laminated field motors are of cast iron and are of neat design, as may be seen by referring to the illustrations. They are so designed that the motor may be supported from side walls or from a ceiling simply by changing the position of the bearing frames. These bearing frames are provided with openings of liberal size for ventilation and access to the commutator. If desired these openings may be covered by wire screens or by close-fitting dust-proof covers. When the latter are used it is, of course, necessary to reduce the horse-power rating of the motor on account of reduced ventilation.

The commutator is built up of pure hard-drawn copper bars, insulated with best India mica and clamped together in a heavy iron shell. It is mounted on the armature spider and is independent of the shaft.

The brushholders are of the box type, permitting the motor to be run in either direction. The smaller motors are provided with two brushes only, placed on opposite sides of the commutator, while

known builders of controllers can supply controllers of the box or drum type suitable for operating these motors. The Ridgway Dynamo & Engine Co. has developed a line of drum controllers especially adapted to certain classes of service. A very important feature of these controllers is that they are provided with short-circuiting points, by means of which the motor is made to act as a brake for quickly stopping both the motor and the machine which it drives.

In any event it is preferable to have the controller furnished by the Ridgway Dynamo & Engine Co., whether of their own or of any other well-known make, since by so doing the controller will be exactly adjusted to the motor and its work.

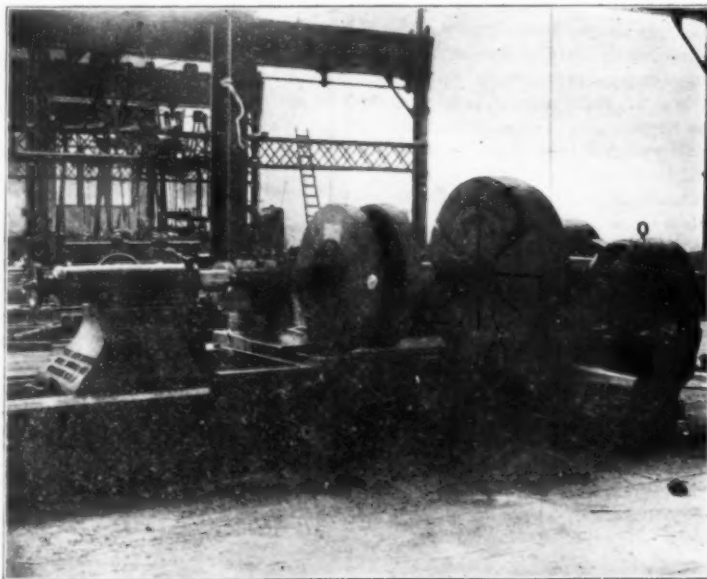
An accompanying illustration presents a view of a 15-horse-power Thompson-Ryan motor having a speed range of from 350 to 1750 R. P. M. Another illustration shows it connected to a 54-inch lathe. The drum-type controller is seen on the floor below the motor.

Machinery users who want to further investigate the advantages of these motors can address the manufacturer, the Ridgway Dynamo & Engine Co., Ridgway, Pa.

The Art of Wise Investing. Publisher, The Moody Publishing Co., New York.

This is a series of short articles on investment values pointing out the essential characteristics of safe investment securities, with a review of the financial pitfalls into which superficial examination inevitably leads. In the volume a sharp line is drawn between wise investing under the motive to place one's principal where it will secure and will bring an adequate return, and speculation, where the desire for large profit is so strong as to make the safety of the principal a matter of minor consideration. The general conclusion of the book is that it is the part of safety and prudence to be securely on the side of conservatism in Wall-street investing.

The J. Rosenbaum Grain Co. of Chicago, which operates about 100 grain ele-



A 54-INCH LATHE WITH MOTOR ATTACHED.

the larger motors have six or more. The brushholders are carried on a yoke ring which is made adjustable so that the brushes can easily be set to their proper position.

All of these motors are of the six-pole type, even to the smallest ones, and are perfectly reversible. They may be run in either direction without any change in the position of the brushes, a very important quality for many classes of service.

Controllers for these motors will vary in design according to the service to which the motor is applied. Most of the well-

vators in the West and Southwest, has secured control of the Chalmette elevator of the New Orleans Terminal Co., which has a daily capacity of 500,000 bushels.

Within the past month two cargoes of Peruvian guano amounting 11,000 tons have arrived at Charleston, S. C.

During October 10,200 tons of Peace river phosphate rock were shipped to Punta Gorda, Fla.

Natural gas has been discovered near Enterprise, Miss., in boring for oil.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore—Warehouses.—Further details have been obtained concerning warehouses for G. Gump & Sons, wholesale liquor dealers, 2400 Frederick avenue, to be erected at 428 and 430 East Pratt street and 118 South Gay street after plans and specifications by Louis Levi, architect, Central Savings Bank Building, 3 East Lexington street. Structures to be four stories high, one 27x47.9 feet and the other 25x33.3 feet; brick with ornamental terra-cotta trimmings; concrete foundations; steel beams; slag roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; electric elevator. Henderson & Co., Ltd., 218 West Fayette street; Frank Maguire, 1720 Sansom street, Philadelphia, Pa.; James Stewart & Co., 319 North Charles street; Morrow Bros., 212 Clay street; J. & S. H. Lamb, 253 West Preston street; Henry Smith & Sons Company, 116 South Register street, and J. H. Miller, 110 Dover street, have been selected to estimate on the construction. Bids to be in November 11.

Baltimore—Restaurant.—Jesse B. Conway, 221 East Pratt street, has awarded contract to Joseph Schamberger, builder, 2215 East Baltimore street, for the construction of restaurant to be located at 702, 704 and 706 East Pratt street. Structure to be three stories high, 52x22 feet; brick with stone trimmings; concrete foundation; steel beams; slag roofing; galvanized-iron cornice; gas fixtures; sanitary plumbing; cost to be about \$5000.

Baltimore—Office Building.—It is reported that the Travelers and Merchants' Association is having plans and specifications prepared for an office building to cost about \$75,000.

Baltimore—Warehouses.—Arthur W. Machen, Jr., Central Savings Bank Building, 3 East Lexington street, as agent for the Patterson property, will shortly commission architect to prepare plans and specifications for several warehouses to be located in the

burned district. Among the lots is one at 111 and 113 South Gay street, extending through to 104 and 106 South Frederick street; another lot is on South street, between Lombard and Pratt streets.

Baltimore—Lodging-house.—Further details have been obtained concerning lodging-house for L. Lipsitz, 653 Columbia avenue, to be erected at 22 Centre Market Space after plans and specifications by Henry J. Tinley, architect, 421 St. Paul street. Structure to be three stories high with basement, 25x65 feet; Roman brick with granite base and stone trimmings; concrete foundation; steel beams; slag roofing; galvanized-iron cornice; granolithic pavement; gas fixtures; sanitary plumbing. George A. Blake, 113 East Lexington street; Jacob Peters, 411 St. Paul street; Frederick Decker & Son, 1209 East Biddle street; Gustav Stohr, 1334 North Stricker street; J. F. Farley, 17 North Frederick street; Monmonier & Sorrell, Joseph Schamberger, 2215 East Baltimore street, and Evans & Marshall, 411 St. Paul street, have been selected to estimate on the construction. Bids to be in November 12.

Baltimore—Warehouse.—The C. A. Gambrell Manufacturing Co., flour manufacturers, Commerce and Cable streets, has purchased the property located at 104, 106, 108, 110 and 112 Commerce street, and it is the intention of the company to erect a four-story warehouse on the site, which is 144x65 feet, if it is unsuccessful in obtaining the space applied for on the new docks.

Baltimore—Stable.—Lemuel T. Appold, Colonial Trust Co., Saratoga street, near Charles street, has awarded contract to B. F. Bennett, builder, 123 South Howard street, for the construction of stable to be located in the rear of 123 South Howard street. Structure to be one and one-half stories high, 25x118.6 feet; brick with concrete foundation; slag roofing; cost to be about \$3000.

Baltimore—Dwellings.—The Charles Spalding Company has awarded contract to J. C. German & Co., builders, 13 Clay street, for the construction of 18 dwellings to be located on Park Heights avenue after plans and specifications by Jacob F. Gerwig, architect, 16 Clay street. Structures to be two stories high, each 16x61 feet.

Baltimore—Bank Building.—The National Bank of Baltimore, Charles and Pleasant streets, has awarded contract to Henry Smith & Sons Company, builders, 116 South Register street, for the construction of bank building to be located at northeast corner Baltimore and St. Paul streets after plans and specifications by Baldwin & Pennington, architects, 311 North Charles street. Structure to be one story high with basement, 37x104.2 feet; granite exterior; concrete foundation; steel beams and girders; slag roofing; granolithic pavement; fireproof vault; ornamental iron; metal frames and sashes glazed with wireglass; fireproof throughout; vault lights. Steel lining, etc., for bank vaults, plumbing, gasfitting, electric tubing and wiring, heating apparatus, flue registers and radiators, counters and grilles, office apparatus and enclosures, inside vestibule and inner-entrance hinged doors not included in contract. Cost to be about \$135,000. This building previously mentioned.

Baltimore—Parish-house.—The trustees of the Church of Atonement, Preston and Chester streets, have awarded contract to Jacob L. Fowble, builder, Cockeysville, Md., for the construction of parish-house to be located at corner of Mura and Chester streets after plans and specifications by Robert H. Cromwell, architect. Structure to be two stories high with basement, 45x73 feet; brick with stone trimmings; concrete foundation; slate roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost to be about \$15,000.

Baltimore—Store Building.—The Johns Hopkins University Trust Estate, R. Brent Keyser, president, 14 East Mount Vernon Place, has awarded contract to J. H. Miller, builder, 110 Dover street, for the construction of store building to be located at 113 North Charles street after plans and specifications by Ellicott & Emmart, architects, 323 North Charles street. Structure to be four stories high with basement, 22x57 feet; brick with granite base and ornamental terra-cotta trimmings; concrete foundation; steel beams; cast-iron columns; slag roofing; metal frames and sashes glazed with wireglass; electric wiring and fixtures; sanitary plumbing. Steam-heating system and elevator not included in contract. This building will be

occupied by the F. W. McAllister Company, opticians, temporarily located at 227 North Charles street. This building previously mentioned.

Baltimore—Church.—Further details have been obtained concerning church building to be erected at 1219 to 1227 Druid Hill avenue for the Union Baptist Church, Harvey Johnson, pastor, 775 West Lexington street, after plans and specifications by William J. Beardsley, architect, 28 West Lexington street. Structure to be one story high with basement, 84x100 feet; granite exterior; concrete foundation; steel beams and girders; cast-iron columns; slate and tin roofing; electric wiring and fixtures; gas fixtures; sanitary plumbing; steam heating system. Henry C. Smyser, 13 North Carey street; John A. Sheridan Co., 321 North Holliday street; Frederick Decker & Son, 1209 East Biddle street; Russell Construction Co., 17 East Saratoga street; James F. Farley, 17 North Frederick street; Willard E. Harn, 2700 Huntingdon avenue; R. H. Ford & Co., 407 St. Paul street, and A. M. Carroll, 719 Lennox street, have been selected to estimate on the construction. Bids to be in about November 13.

Baltimore—Office Building.—Mrs. Henry Barton Jacobs, 11 West Mount Vernon Place, has commissioned Parker & Thomas, architects, 612 North Calvert street, to prepare plans and specifications for an office building to be located at the southwest corner German and South streets. The height of the building has not as yet been determined. It will be 54 feet front and 100 feet deep.

Baltimore—Warehouses.—William Lannan & Son, wholesale liquor dealers, 206 West Camden street, have awarded contract to Wells Bros. Co., builders, at 344 North Charles street, for the construction of two warehouses to be located at 20, 22 and 24 Light street, after plans and specifications by Simonson & Pietsch, architects, Hoen Building, 304 East Lexington street. Structures to be six stories high with basement, 86x107 feet; granite to third story; brick with Indiana limestone trimmings for remaining stories; three ornamental iron bay windows; concrete foundations; steel-frame construction; reinforced concrete floors and roof (short span); fireproof throughout; slag roofing; marble floors; fire escape; galvanized-iron skylights; interior marble work; granolithic pavement; metal frames and sashes glazed with wireglass; sanitary plumbing. Elevators, electric wiring and fixtures and heating apparatus not included in contract. These buildings previously mentioned.

Baltimore—Warehouse.—Brown & Griffith, 123 West Saratoga street, as agents for William R. Stewart, will erect a warehouse to be located at 104 South street. Structure to be four stories high with basement, 25x135 feet; brick with stone trimmings; concrete foundation; steel beams; electric wiring and fixtures; sanitary plumbing; power elevator.

Baltimore—Apartment-house.—D. Sterett Gittings, 211 Maryland Telephone Building, Lexington and Courtland streets, and John J. Milligan, 603 North Charles street, have purchased the property located at northeast corner Centre and St. Paul streets, and it is reported that it is their intention to erect on the site, which is 33x55 feet, an apartment-house to contain about 30 or 40 rooms.

Baltimore—Warehouse.—John S. Bridges, 28 South Charles street, has purchased the site located at 109 Hollingsworth street, and will erect warehouse. Structure to be four stories high, 18.6x98 feet; brick with stone trimmings; concrete foundation; steel beams; tin or slag roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; elevator.

Baltimore—Office and Store Building.—The Continental Trust Co., Calvert and Baltimore streets, as trustee for the Carroll estate, has awarded contract to Morrow Bros., builders, 212 Clay street, for the construction of office and store building to be located at 107, 109, 111 and 113 East Baltimore street, after plans and specifications by Beecher, Friz & Gregg, architects, southeast corner Cathedral and Hamilton streets. Structure to be four stories high with basement, 61x69 feet; brick with Indiana limestone and terra-cotta trimmings; concrete foundations; steel-frame construction; reinforced concrete floors (short span); fireproof throughout; slag roofing; metal frames and sashes glazed with wireglass; vault lights. Electric wiring and fixtures, sanitary plumbing, heating system, elevators, interior finish and store fronts not included in contract. This building will be so constructed that four additional floors

can at any time be built. This building previously mentioned.

Baltimore—University Buildings.—The trustees of the Johns Hopkins University, R. Brent Keyser, president, 14 East Mt. Vernon Place, has selected the designs of Parker & Thomas, architects, 1 Somerset street, Boston, Mass., and 612 North Calvert street, Baltimore, Md., for the development of Homewood, which is to be the future site of the university buildings and grounds. The plans call for the following buildings: Library building of 12,000 square feet, allowing 50 per cent. increase; a classroom building of 8000 square feet, allowing 50 per cent. increase; chapel of 6000 square feet, Levering Hall (Y. M. C. A. Building) of 3000 square feet, a building containing administrative offices and assembly hall of 12,000 square feet, one or two buildings, either two or four stories high, for classrooms of 10,000 square feet, allowing 50 per cent. increase; six buildings for laboratories containing 10,000 square feet each and allowing 100 per cent. increase; two museums for laboratory purposes containing 10,000 square feet each and allowing 100 per cent. increase; two other museums one-story high of 10,000 square feet each and allowing 50 per cent. increase; an auditorium building with seating capacity of 2000, with stage, containing 12,000 square feet; three buildings for dormitories from three to five stories high containing 7500 square feet each and allowing 200 per cent. increase, or six additional buildings; dining hall containing 5000 square feet and allowing 100 per cent. increase; building or buildings for athletics containing 10,000 square feet and allowing 50 per cent. increase; power-house to contain all necessary machinery for heating and lighting purposes, and which will be connected to all buildings by underground conduits. The selection of the plans of the above architects includes the laying out of the grounds and furnishing the designs for the buildings, but the trustees retain the right to select architect or architects to furnish other designs for any of the buildings.

Baltimore—Warehouse.—Further details have been obtained concerning warehouse for Charles H. Ware, 1930 Madison avenue, as trustee, to be erected at 24 Hanover street, after plans and specifications by Owens & Sisco, architects, 14 West Lexington street. Structure to be five stories high with basement, 29x100.4 feet; brick with granite base and buff Indiana limestone trimmings; concrete foundations; steel beams; cast-iron columns; slag roofing; granolithic pavement; galvanized-iron skylight and cornice; fire shutters; box chute; automatic elevator safety gates; electric wiring and fixtures; sanitary plumbing; electric elevator. Heating system not included in contract. Morrow Bros., 212 Clay street; J. H. Miller, 110 Dover street; Henry Smith & Sons Co., 116 South Register street; Burnham & Wells, Builders' Exchange Building, 2 East Lexington street; Thomas L. Jones & Son, 410 West Saratoga street; Thomas B. Stanfield & Son, 109 Clay street, have been selected to estimate on the construction. Bids to be in November 16.

Baltimore—Warehouse.—Brown & Brune, 222 St. Paul street, as trustees, have awarded contract to Brady & Watters, builders, 532 St. Paul street, for the construction of warehouse to be located at 104 South Gay street. Structure to be three stories high, 24.5x52 feet; brick with stone trimmings; concrete foundations; steel beams; slag roofing; galvanized-iron cornice; electric wiring and fixtures; sanitary plumbing; elevator; cost to be about \$6000.

Baltimore—Dwellings.—Joseph Schamberger, builder, 2215 East Baltimore street, will erect for himself five dwellings to be located at 2122, 2124, 2126, 2128 and 2128½ East Baltimore street. Structures to be three stories high with basements, 17x70 feet; brick with stone trimmings; tin roofing; galvanized-iron cornices; gas fixtures; sanitary plumbing; furnace-heating systems; cost to be about \$17,000.

Manufacturing Buildings and Other Enterprises.

Baltimore—Leather-belting Factory.—Edward H. McKeon, 229 North Holliday street, has purchased the property located at 113 and 115 West Lombard street, and will erect a factory building on the site after plans and specifications by Charles B. Keen, architect, 1220 Chestnut street, Philadelphia, Pa. Structure to be four stories high, 45.1x112.3 feet; brick with Indiana limestone trimmings; concrete foundations; mill construction; slag roofing; galvanized-iron cornice and sky-

light; metal frames and sashes glazed with wireglass; metal ceilings; sanitary plumbing. Heating system, electric wiring and fixtures and elevator not included in contract. John A. Sheridan Co., 321 North Holliday street; Thomas Stanfield & Son, 109 Clay street; Henry Smith & Sons Co., 116 South Regester street; Henry S. Rippel, 7 Clay street; Cramp & Co., 407 St. Paul street, and Kendrick & Roberts (Inc.), 216 North Liberty street, have been selected to estimate on the construction. Bids to be in November 12. This building will be occupied by the Baltimore Belting Co., manufacturer of leather belting, temporarily located at 229 North Holliday street. All of the machinery, including boilers, engines, etc., has been contracted for.

Baltimore—Electric-light and Power Plant. The United Electric Light & Power Co., 30 South Eutaw street, has purchased a tract of about 22 acres of land in South Baltimore on the water-front, and it is the intention of the company to establish on the site an electric-light and power plant of 13,000 horsepower, which will later be increased to 50,000 horsepower. The building will be 100x200 feet and will be constructed of reinforced concrete. The cost of building and equipment will be about \$1,000,000.

Baltimore—Wagon-manufacturing Plant.—T. R. Carskadon of West Virginia has invented a universal dump and farm wagon and contemplates establishing a plant for its manufacture, the factory to be located in Baltimore, Atlanta or New Orleans. He is now endeavoring to complete arrangements, and correspondence in reference to the projected enterprise can be addressed to T. R. Carskadon, Room 290, Lindell Hotel, St. Louis, Mo.

Baltimore—Tin-can Factory.—The Consolidated Can Co., recently incorporated with a capital stock of \$500,000, will establish a tin-can factory in Baltimore as well as Philadelphia and Brooklyn. Among those interested in the company are Thomas G. Cranwell, 9 East Pleasant street, and John G. Tallafiero, 101 East Lanvale street.

Baltimore—Electric-light and Power Plant. The Maryland Telephone & Telegraph Co. is completing all arrangements and contracts for its proposed electric plant referred to lately. A site of 6.4 acres on the water front has been purchased, and preliminary preparations are being made to erect the necessary buildings, contracts for which will be awarded to John Waters, 23 East Centre street.

Geneva—Cotton Mill.—It is proposed to organize a company with capital stock of \$50,000 to establish the cotton mill lately mentioned. The Geneva Industrial and Improvement Association is promoting the enterprise.

Huntsville—Fertilizer Factory.—Butler-Kyser Oil Co., previously reported incorporated to erect and operate 60-ton cottonseed-oil mill, has let contract to A. M. Booth for the erection of building to be equipped as fertilizer factory.

Palos—Coal-mining.—Reports state that B. W. and A. F. Whitfield, operating the Black Creek Coal Co. at Nauvoo, Ala., have purchased from the Jasper Land Co. a tract of coal land in Walker county at \$48,000, and will at once arrange for its development.

York—Ice Plant.—It is reported that Frank Holman contemplates building 10-ton ice plant.

Subbids Wanted.

Mention of contractors wanting subbids on construction work and material will be found, when published, in the "Machinery Wanted" column on another page under the heading of "Building Equipment and Supplies."

ALABAMA.

Bessemer—Stone Foundry.—J. R. Day is erecting foundry for the manufacture of a grate stove which he has patented. Plant will have a daily capacity of 100 stoves, which will later be increased.

Bessemer—Pipe Foundry.—It is reported that the United States Cast Iron, Pipe & Foundry Co. will expend \$200,000 in improving and enlarging plant.

Birmingham—Coal Mining.—Henry B. Gray, W. H. Soper and John D. Elliot have purchased at \$100,000 coal lands in Walker county of the West Pratt Coal Co. and reorganized the company with Mr. Gray as president; Mr. Soper, vice-president and general manager, and Mr. Elliot, secretary-treasurer, to operate the mines; daily output 800 tons of coal.

Birmingham—Coal Mines and Coke Ovens. Yolande Coal & Coke Co., previously reported incorporated with \$300,000 capital, is developing coal properties near Yolande, Ala., the mines having an output of 500 tons per day, and is also arranging for the building of 500 coke ovens.

Ensley—Grocery Company.—Charles Rouss, Louis Maenza and associates have incorporated the Rouss & Maenza Grocery Co. with \$15,000 capital.

Ensley—Steel Plant.—The Tennessee Coal, Iron & Railroad Co. will make improvements to its steel plant that will increase the capacity to about 20,000 tons per month, and some other improvements tending to increase the capacity have been begun; general offices at Birmingham; New York offices at 100 Broadway.

Geneva—Cotton Mill.—It is proposed to organize a company with capital stock of \$50,000 to establish the cotton mill lately mentioned. The Geneva Industrial and Improvement Association is promoting the enterprise.

Huntsville—Fertilizer Factory.—Butler-Kyser Oil Co., previously reported incorporated to erect and operate 60-ton cottonseed-oil mill, has let contract to A. M. Booth for the erection of building to be equipped as fertilizer factory.

Palos—Coal-mining.—Reports state that B. W. and A. F. Whitfield, operating the Black Creek Coal Co. at Nauvoo, Ala., have purchased from the Jasper Land Co. a tract of coal land in Walker county at \$48,000, and will at once arrange for its development.

York—Ice Plant.—It is reported that Frank Holman contemplates building 10-ton ice plant.

ARKANSAS.

Arkansas—Cotton Mill.—Arthur S. Phillips, 22 Bedford street, and W. B. Edgar, both of Fall River, Mass., and Raymond D. Borden of Taunton, Mass., have incorporated the Southwestern Cotton Mills, with capital stock of \$100,000, and will establish a cotton mill, probably in Arkansas. They are not prepared to announce further details at present.

Brinkley—Light and Water Plant.—Farrell Light, Heat & Water Co. has incorporated, with \$50,000 capital. J. J. Farrell is president and treasurer; H. W. Boyle, vice-president, and W. S. Kilpatrick, secretary.

Calamine—Zinc Mines.—Percy Finch, Shelby L. Shaver, Edward D. Hoskins and M. F. Street have incorporated the Enterprise Zinc Co. with \$100,000 capital to operate zinc mines.

Lake Village—Ice and Cold-storage Plant. Reports state that the A. & T. Consolidated Ice & Cold Storage Co. will increase capital and enlarge plant.

Little Rock—Mining.—Panther Creek Mining Co. has been incorporated, with \$150,000 capital. John B. Jones is president.

Little Rock—Consulting Engineers.—Southwestern Engineering & Development Co. has been incorporated, with \$2500 capital. Durand Whipple is president and treasurer; W. F. B. Berger, vice-president and general manager, and Albert R. Bruner, secretary.

Mammoth Springs—Cannery.—Memphis Canning Co. of Jeffersonville, Ind., reported last week as investigating site for establishment of cannery, will erect building 400x62 feet,

for which plans are being prepared by Maurice Cohen of Jeffersonville, Ind. Work on building to start January 1.*

Portia—Cotton Gln and Grist Mill.—L. A. Brittain will rebuild next spring cotton gln and grist mill reported burned last week.*

Newport—Sewerage System.—City is considering the construction of sewerage system. Address The Mayor.

Pine Bluff—Heading Factory.—It is reported that W. B. Simmons and H. A. Bennett, proprietors of the Malden Heading Factory, Malden, Mo., have secured site and will remove their barrel-heading factory to Pine Bluff.

Searcy—Electric-light Plant.—City has let contract to the Black Hawk Electric Co. of Davenport, Iowa, for the erection of electric-light plant previously reported to be built at a cost of \$21,000.

Walnut Ridge—Ice Plant.—It is rumored that W. R. Lane will build \$10,000 ice plant.

FLORIDA.

Eustis—Kaolin Mines.—Report mentioned last week that the Lake Region Mining Co. would develop kaolin mines near Eustis is incorrect.

Glenwood—Shingle Mill.—Bond Lumber Co. will erect mill building 30x40 feet to replace structure recently burned; daily capacity 40,000 shingles. Machinery has been purchased.

Jacksonville—Drug Factory.—P. L. Sutherland has let contract to W. T. Hadlow & Co. for the erection of three-story brick building to be occupied by the Southern Drug Manufacturing Co. for the manufacture of drugs, etc. This company will, in a short time, increase its capital.

Jacksonville—Construction Company.—J. C. Halsema and O. P. Woodcock, building contractors, have organized the Halsema-Woodcock Construction Co., with \$100,000 capital.

Jacksonville—Furniture Factory.—Rockford Furniture Co. has been incorporated, with \$20,000 capital, by Newton C. Garrett, John R. Suggs and David H. Cooper, to manufacture and deal in furniture, etc.

Lakewood—Saw and Planing Mill, Dry-kilns.—Britton Lumber Co., previously reported incorporated with \$100,000 capital, is erecting saw and planing mill with a capacity of 60,000 feet and two dry-kilns; J. W. J. Capps, architect, and A. L. Russ, engineer in charge.*

Madison—Carriage Repository.—Incorporated: Ashley-Pope Company with \$10,000 capital. Randal Pope is president; D. C. Ashley of Valdosta, Ga., vice-president, and W. B. Davis, secretary-treasurer.

Newberry—Phosphate Plant.—Cummer Co. will erect building 48x100 feet, with shed 40x400 feet, to replace structure recently reported burned.

Pensacola—Lumber Mill.—W. S. Rosasco of Pensacola, P. L. Rosasco and P. M. Macarthy of Pinewood, Fla.; T. Frost of Milton, Fla., and associates have incorporated the Bay Point Mill Co.

Tampa—Veneer and Transportation Company.—Cuban-American Veneer & Transportation Co. has been organized with Joseph Zimmerman, president; Myron E. Gillett, vice-president; D. C. Gillett, secretary, and William F. Zimmerman, treasurer; capital \$150,000.

GEORGIA.

Acworth—Cotton Mill.—The Acworth Cotton Manufacturing Co., reported last week, contemplates building a 5000-spindle mill for manufacturing yarns. Machinery contracts will probably not be awarded before next March.

Americus—Electric-light Plant.—Americus Gas & Electric Co. of Providence, R. I., has made application for franchise to build and operate electric-light plant.

Atlanta—Coal Mines and Coke Ovens.—Emory River Coal Co. has incorporated, with \$10,000 capital, to mine coal and manufacture coke; incorporators, George P. Howard, A. H. Wood, A. J. Howard and W. S. Wood.

Columbus—Bridge.—Muscouge County Commissioners contemplate erecting a steel bridge over Randle creek, on the Pine Knot Springs road.

Columbus—Sash, Door and Blind Factory.—Columbus Iron Works Co. will establish sash, door and blind factory at a cost of about \$25,000.

Covington—Furniture Factory.—Reports state that G. W. Simmons, of Island Shoals (P. O. Newtons Factory), Ga., has secured site on which to locate furniture factory.

La Grange—Publishing.—Incorporated: Reporter Publishing Co., with \$5000 capital, by J. O. Bell, G. E. Billingshurst and associates, to publish the La Grange Reporter, a weekly newspaper.

Milledgeville—Sewerage System.—City will vote January 24, 1906, on the issuance of \$20,000 of bonds for the construction of sewerage system. Address The Mayor.

Rome—Cottonseed-oil Mill, Fertilizer Factory.—Co-operative Cotton Oil Co. has been incorporated, with \$40,000 and privilege of increasing to \$100,000, by J. A. Glover, J. L. Bass, M. N. Griffin and associates, to operate cottonseed-oil mill, fertilizer factory, etc.

Rome—Ice and Cold-storage Plant.—Rome Ice Manufacturing Co. is erecting ice and cold-storage plant with a capacity of 3000 tons of ice. Company has also let contract for an artesian well. J. W. Hancock is manager.

KENTUCKY.

Beattyville—Planing Mill.—Railway Tie & Lumber Co. has been incorporated, with \$50,000 capital, to erect and operate a planing mill.

Lexington—Oil Wells.—It is reported that Lewis A. Hall and A. E. Perren of New York have purchased from the Cincinnati Oil Co., through C. R. Brewer, 23,000 acres of oil lands in Kentucky at \$250,000, and will at once arrange to operate the wells.

Lola—Saw and Grist Mill.—Reports state that W. H. Bradshaw will erect saw and grist mill.

Louisville—Horseshoe Plant.—Reports state Charles G. Phillips, president, and Frank Graham, secretary, Graham-Phillips Iron Shoe & Iron Co., are investigating site for the erection of mill to make horse and mule shoes. If suitable site is secured necessary buildings will be erected; main building to be 100x180 feet. Mill will have a yearly output of 30,000 kegs of finished shoes and the rolling mill will have a capacity of 100,000 kegs of shoes a year. Messrs. Phillips and Graham can be addressed in care of the Commercial Club.

Louisville—Filter Works.—Haselden Company has incorporated, with \$10,000 capital, to manufacture a patent filter; incorporators, J. R. and J. S. Haselden of Lancaster, Ky.; Gus T. O'Leary of Shelbyville, Ky.; A. J. Hays of Smithfield, Ky., and W. S. Hays of Lagrange.

Munfordville—Bridge.—Hart county contemplates voting on the issuance of \$44,000 of bonds for the construction of bridge across Green river at Munfordville. Address Hart County Commissioners.

Paducah—Handle Factory.—Brake-Givens Improved Tool Handle Co. will erect building 50x150 feet and install additional machinery for increasing output, as reported last week. Both electric and steam power will be used.*

Salt Lick—Woolen Mill.—C. C. Johnson of Salt Lick, M. H. Christian and W. B. Farrold of Lexington, Ky., have incorporated the Salt Lick Woolen Mills Co., with capital stock of \$40,000, to build a woolen mill.

Vernon—Lime-kilns.—It is reported that the Rockcastle Development Co. is arranging for the erection of lime-kilns at its gas well, recently sunk to a depth of 800 feet, the gas to be utilized in burning the lime.

LOUISIANA.

Abbeville—Ice-making and Refrigerating Plant.—Reports state that Dozier Candy Co. will install new and additional machinery for making ice cream, doubling its present capacity; also install refrigerating plant.

Covington—Dairy.—It is reported that W. G. Evans, secretary of the Progressive Union, is in receipt of a letter from Mississippi parties relative to locating a dairy at Covington.

Jennings—Oil-pipe Line.—O. W. Heywood and L. F. Benckensten have completed arrangements for the construction of proposed pipe line from Jennings to the Mississippi river, a distance of 92 miles; 10 pumping stations will be installed, and the oil will be stored in earthen reservoirs; daily output of wells, 53,000 gallons of oil.

Jonesvale—Cottonseed-oil Mill and Ice Plant.—J. W. Swayze, P. M. Matthews and others are organizing company to erect and operate cottonseed-oil mill and ice plant.

Kinder—Timber Land.—Reports state that J. G. Powell has purchased from the Orange Land Co., Ltd., the timber rights on 5320 acres of land near Kinder at \$90,040.

Plaquemine—Electric-light Plant.—City has granted franchise to Victor M. Garber of Shreveport, La., for the erection of electric-light and power plant.

New Iberia—Paving.—City has let contract to J. W. Taylor for constructing 88,000 square feet of cement walks at 17½ cents, and 38,000 lineal feet of curbing at 52½ cents.

MARYLAND.

Cumberland—Music Clip.—Adams Novelty Manufacturing Co. has been incorporated by

J. George Hermann, F. William Hermann, Irving C. Adams, Daniel H. Boyer of Cumberland and Albert N. Baker of Pittsburg, Pa., for the manufacture of a music holder or clip patented by Mr. Adams. Company was reported last May as to be organized for the manufacture of this device.

Friendsville—Drug Factory.—J. F. Carpenter Chemical & Manufacturing Co. has incorporated, with \$3000 capital, to manufacture and deal in drugs and chemicals; incorporators, D. A. Turney, L. B. Ryland, W. H. Garner, J. F. Griffin and others.

Hagerstown—Vehicle Works.—Andrew K. Coffman, J. H. Koons, Frank M. Doornberger, Harry L. Coffman and H. W. Doornberger have incorporated the Hagerstown Wagon & Carriage Co., with \$10,000 capital.

MISSISSIPPI.

Eupora—Cotton Gin, Oil and Planing Mills. Thomas A. Finch, W. A. Hays and E. T. Finch have formed a \$20,000 company to erect and operate cotton gin, oil mill and planing mill.

Gulfport—Printing.—W. B. Clarke, T. I. Clarke and others have incorporated the Clarke Printing Co. with \$10,000 capital.

Jackson—Gas Plant.—C. A. Bonds, A. C. Jones, D. H. Holder and associates have applied for franchise to construct and operate gas plant. About \$200,000 will be expended.

Jackson—Orphanage.—Board of trustees of the Water Valley Orphanage, Water Valley, Miss., are investigating site with a view to removing orphanage to Jackson. It is proposed to erect \$30,000 building. Rev. T. H. Dorsey can be addressed.

McComb City—Bakery.—Incorporated: McComb City Steam Bakery, with \$25,000 capital, by L. L. Dawson, T. W. James, W. B. Mixon and others.

Meridian—Manufacturers' Agents.—Messrs. E. M. Martin and Waldo G. Myers have organized as Martin & Myers, to act as manufacturers' agents and deal in machinery and mill supplies. They have established offices in the Klein Building. They are prepared to correspond with a few manufacturers and dealers who may want to be represented in their territory.*

Newton—Woodworking Plant.—C. B. McIntosh and G. O. Parker have organized the Newton Manufacturing Co. to take over, enlarge and operate the woodworking plant operated by Mr. McIntosh.

Sumrall—Saw-mill.—J. J. Newman Lumber Co. of Hattiesburg, Miss., will erect saw-mill at a cost of \$200,000 and having a capacity of 7,000,000 feet of lumber per month.

Tutwiler—Saw-mills.—Kentucky Lumber Co., composed of J. A. Justin and J. H. Higdon of Providence, Ky.; W. M. Farless of Henderson, Ky., and associates will install band mill with a daily capacity for cutting 40,000 feet of lumber.

MISSOURI.

Kansas City—Publishing.—I. W. Dumm Publishing Co. has been incorporated, with \$150,000 capital, by I. W. Dumm, E. S. Ilora, William Clarke and others.

Brunswick—Electric-light Plant and Water-works.—Private parties will erect electric plant and water-works for furnishing the city with light and water, after plans by W. K. Palmer, M. E., 718 Dwight Building, Kansas City, Mo. Contracts have all been let.

Chadwick—Ginseng Company.—Incorporated: Chadwick Ginseng Co., by E. B. Browne, M. L. Akinson and E. L. Reel, with \$50,000 capital.

Kansas City—Water-works Improvements.—Board of Public Works has ordered specifications prepared for another high-pressure engine for Turkey creek station, and it is also stated that bids will be asked shortly on two more pumping engines for Quindaro station.

Kansas City—Bakery, Barn, etc.—Smith Steam Baking Co. will erect three-story building, 120x216 feet, at a cost of \$40,000, and equip as a bakery, and \$5000 barn.

Kansas City—Packing Plant.—American Dressed Beef Co. has let contract to Flanagan Bros. for the erection of slaughter-house, refrigerator plant 300 feet square and building 180x250 feet to be used as boiler and engine room; plant will have a daily capacity of 500 cattle and 1000 hogs. John Thomas prepared the plans.

Kansas City—Natural-gas Mains.—Kansas City, Missouri, Gas Co., Hugh J. McGowan, president, has applied for franchise to supply the city with natural gas.

Marionville—Crystal Battery Company.—Electrical Crystal Battery Co. has been incorporated, with \$500,000 capital, by W. H. Bradford, G. W. Greener, C. D. Turner and others.

Moberly—Building Company.—W. A. Rothwell, A. B. Little, N. P. Cape and others have incorporated the Jefferson Building Co., with \$6000 capital.

Perryville—Milling Company.—Wilkinson Milling Co. has been incorporated, with \$20,000 capital, by Moses H. Milster, Charles A. Weber, E. Estel and others.

Springfield—Construction Company.—Holman Cement Stone Construction Co. has been incorporated, with \$3000 capital, by H. B. McDaniel, F. H. Larving and W. D. Tatlow.

St. Louis—Chemical Factory.—Preventol Chemical Co. has incorporated, with \$2000 capital, to manufacture and deal in chemicals, etc.; incorporators, Jordan W. Lambert, Robert T. Deacon and Lewis Spindler.

St. Louis—Hardware Specialties.—Lewis S. Haslam, Otto H. Worch and Oliver F. Richards have incorporated the Wizard Hame Clip Co., to manufacture and sell hame clips and other hardware and harness specialties; capital \$2000.

St. Louis—Oil and Gas Wells.—Tri-State Natural Gas & Fuel Co. has incorporated, with \$100,000 capital, to drill for oil and gas and to transport same in pipes and mains for supplying customers; incorporators, John H. Overall, Jr., Lee M. Edgar of St. Louis, Mo.; J. C. Carpenter of Chanute, Kan.; W. D. Miles of Kansas City, Mo., and J. W. Creech of Herington, Kan.

St. Louis—Coal and Ice Company.—Charles C. Rupert, Bertrand F. Fenn and William Klausmeyer have incorporated the Rupert-Fenn Coal & Ice Co., with \$5000 capital.

St. Louis—Spiral-spring Company.—Incorporated: Supplementary Spiral Spring Co., with \$6000 capital, to manufacture and deal in mechanical appliances, devices, springs, etc.; incorporators, William Young, Roland Hill and Oscar L. Herbert.

\$25,000 capital, and privilege of increasing to \$100,000; incorporators, P. F. Freeland, A. F. Larkin, E. B. Gibson and E. M. Andrews.

Greensboro—Silk Mill.—Plumer & Sons of Passaic, N. J., and New York city have addressed Greensboro parties in reference to the advantages of Greensboro as site for a silk mill. They represent silk manufacturers who contemplate building a \$25,000 mill in the South.

Hendersonville—Electric-light Plant Improvements.—Town contemplates enlarging electric-light plant. Address Town Clerk.

High Point—Knitting Mill.—J. H. Mills, J. H. Adams and others have incorporated the High Point Hosiery Mills, with a capital of \$20,000. This company will own and operate the plant recently noted as to be established by J. H. Mills with 100 machines and dyeing equipment. All contracts have been awarded.

Morganton—Saw-mills.—Reports state that Hutton & Burbonnais have purchased 15,000 acres of timber land in the South mountains, and will erect saw-mills for cutting the timber.

Raleigh—Hardware Company.—Chartered: Carolina Hardware Co., with an authorized capital of \$75,000, by W. C. Tucker, C. E. Watson, G. S. Tucker, Dr. McKee Tucker and C. D. Tucker, to take over the hardware business of R. E. Prince, 225 Wilmington street, and enlarge it.

Spray—Woolen Mill.—The Spray Woolen Mills is erecting drying rooms, and will equip a dye-house.

Whiteville—Publishing.—Company has been organized with J. F. Barkley, president; H. P. Hertner, secretary, and R. C. Powell, treasurer, to publish the Columbus County Trucker Reporter; capital \$4000.

Manning—Water-works.—City contemplates constructing system of water-works. D. M. Bradham is mayor.

Manning—Mercantile.—M. M. Krasnoff and others have incorporated the Krasnoff Mercantile Co., with \$10,000 capital.

North Augusta—Cotton Mill.—It is reported that Walter M. Jackson and associates of Augusta, Ga., are having plans prepared by T. B. Hitchcock & Co. of Columbia, S. C., for the erection of a 2500-spindle cotton mill, and that contracts for the machinery have been awarded.

Union—Water-power-Electric Plant.—The Broad River Light & Power Co., reported incorporated last week with capital stock of \$1,000,000, will build plant at Gravel Shoals on the Broad river. About 15,000 horse-power will be developed and transmitted by electricity, 40 miles of line being required, to operate cotton mills and other factories. The dam to be constructed will be 10 feet above water level and 1000 feet long; canal to be about one and one-half miles long, connected with power-house by four steel flumes. The power-house will be built for eight 1500 three-phase machines, with transformer-house to correspond. Gadsden E. Shand of Columbia, S. C., is the engineer in charge. P. J. Balaguer is president; E. W. Wynne, vice-president, and F. K. Myers, secretary-treasurer, all of Charleston, S. C.

Walhalla—Water-power-Electrical Plant.—William J. Stribling, James Thompson of Walhalla, W. B. Frink of New York, N. Y., and associates are the incorporators of the Oconee Water, Light & Power Co., reported incorporated last week with \$5000 capital, which will be increased to \$125,000. Company will build water-works and erect plant for transmitting power electrically seven miles to Walhalla and adjacent towns, and furnishing power to cotton mills. About \$100,000 will be invested.*

TENNESSEE.

Bristol—Woodworking and Building-material Plant.—Reports state that Smith & Wilson, contractors, have purchased building in South Bristol and will install machinery for operating a woodworking and building-material factory.

Chatanooga—Furniture Factory.—Gem Furniture Co. has been incorporated by Geo. E. Mattice, William A. Mattice, J. M. Long, P. B. Abbott and G. Q. Adams, to manufacture furniture; capital \$5000.

Dickson—Water-works.—It is reported that A. G. Rickert will install water-works.

Jackson—Tile Works.—Southern Tile Works will increase capital to \$25,000.

Johnson City—Panel Factory.—Standard Oak Veneer Co. is erecting two-story building, 50x120 feet, which will be equipped for manufacturing panels.

Johnson City—Machine Shop.—South & Western Railway is erecting a machine shop, and later contemplates building a foundry. Geo. L. Carter, Bristol, Tenn., is president.

Knoxville—Gas-plant Improvements.—Knoxville Gas Co., which has just expended \$50,000 in betterments to its plant, contemplates making further improvements.

Madisonville—Knitting Mill.—The Madisonville Knitting Mills will double its capacity; present equipment is 25 machines.

Memphis—Cotton Gins.—Memphis Ginning & Cotton Huller Co. has increased capital from \$5000 to \$10,000.

Nashville—Lumber Plant.—Reports state that the Indiana Lumber Co. will rebuild saw-mill, planing mill and dryhouses, recently burned at a loss of \$40,000.

Nashville—Suburban Development.—Eastland Land Co. has been incorporated, with \$30,000 capital, by A. H. Robinson, Jas. C. Bradford, C. H. Erwin and associates, for suburban development.

Wilder—Coal Mines, Timber Land, etc.—Fentress Coal & Coke Co., recently organized with John T. Wilder of Knoxville, Tenn., president, is preparing to open coal mines and develop the timber on 10,000 acres of land. Mines will have an output of 25 cars a day at the start, which will later be increased.

TEXAS.

Beaumont—Well-drilling Company.—Incorporated: Zivley Well Drilling Co. has been incorporated, with \$500 capital, by T. F. Benningham, V. N. Zivley and J. W. Boynton.

Beaumont—Saw-mill.—Interstate Lumber Co., reported incorporated last week with \$50,000 capital, has an established mill at Odelle, 20 miles south of Beaumont, the capacity of which will be increased from 20,000 to 50,000 feet.

Beaumont—Oil Wells.—Little Jap Oil Co. has been incorporated, with \$10,000 capital, by

The Rebuilding of Baltimore---How the Daily Bulletin is Covering It.

Have Yet to Find an Inaccurate Report.

J. C. Palmer. PALMER & RICH COMPANY, E. R. Rich. Manufacturers' Agents and Jobbers in Machinery, Tools and Mill Supplies. Engines, Boilers, Steam Pumps, Shafting, Hangers, Couplings, Pulleys. 306 North Holliday Street. Baltimore Branch Page Belting Co.

Baltimore, Md., May 26, 1904.

Manufacturers' Record Publishing Co.:

Gentlemen—Regarding the accuracy and completeness of the reports you are furnishing through the *Daily Bulletin*, would say that we have carefully scrutinized your *Daily Bulletin* sheets, and have yet to find an inaccurate report.

Yours truly,

PALMER & RICH COMPANY.

St. Louis—Land and Lumber Company.—John R. Cross, Charles E. Eldridge, Robert F. Smith and Perry P. Taylor have incorporated the Red Head Land & Lumber Co., with \$100,000 capital.

St. Louis—Electric-light Plant.—The Union Light & Power Co. has purchased site on which to erect buildings to be equipped as a transformer station.

St. Louis—Coal Company.—Clarice P. Aid, Francis A. Aid and Herbert H. Aid have incorporated the Aid Coal Co., with \$10,000 capital.

NORTH CAROLINA.

Burlington—Structural-steel Works.—The Virginia Iron & Bridge Co. of Roanoke, Va., mentioned last week as having purchased at \$200,000 the plant and business of the Carolina Steel Bridge & Construction Co., has increased its capital stock to \$500,000. It will have an annual capacity of 20,000 tons of manufactured material, and will continue to contract for the construction of bridges and other structural work. C. Edwin Michael will remain president; offices at Roanoke, Va.

Charlotte—Machine Shop.—The D. A. Tompkins Co. has begun the erection of a two-story building 75x150 feet, which will be equipped as machine shop, enlarging the company's facilities.

Charlotte—Cotton Mill.—Arthur S. Phillips, 22 Bedford street, and W. B. Edgar, both of Fall River, Mass., and Raymond D. Borden of Taunton, Mass., have incorporated the Nashawena Silk Mills, with capital stock of \$125,000, to establish silk mill. They will probably locate this plant in the South, but if they do not, will locate within the cotton belt a cotton mill for spinning only, the product to be shipped North for weaving. No further details can be stated at present.

Greensboro—Trading Stamps.—Incorporated: Southern Trading Stamp Co., with

Williamston—Mercantile.—Incorporated: Gorks-Hayes Company with \$20,000 capital by William Gorks and others.

Wilmington—Lumber Mill.—Waccamaw Land & Lumber Co., reported last month as having purchased 171,120 acres of timber land in Brunswick county, has purchased the mill of the Chadbourne Lumber Co. on Nutt street, which will be enlarged and the capacity greatly increased. Band saws, resaws and gang edgers will be installed.

SOUTH CAROLINA.

Anderson—Chartered: J. S. Fowler Company, with \$20,000 capital, by J. S. Fowler, I. H. McCalla and D. L. Barnes.

Charleston—Ice Delivery.—Ice Delivery Co., reported incorporated last month with \$10,000 capital, will increase capital to \$20,000 for enlarging and improving ice-delivery system. A. W. Wieter is president; Henry Nolte, vice-president, and A. J. W. Gorse, secretary.

Columbia—Real Estate.—Chartered: Eau Claire Land & Improvement Co., with \$16,000 capital, by Wm. H. Lyles, A. E. Gonzales and F. H. Weston.

Darlington—Laundry.—R. E. Dean and associates have purchased the plant of the Corinet Steam Laundry Co., and have incorporated the Darlington Steam Laundry Co., with \$3000 capital, to operate it.

Darlington—Sewerage System.—Charles C. Wilson of Columbia, S. C., is engineer in charge of sewerage system, for the construction of which \$30,000 of bonds were reported last month as voted. Bids for construction will be asked within 30 days.*

Hartsville—Vehicle Works.—Hartsville Buggy & Wagon Co., previously reported incorporated with \$5000 capital, has completed organization with N. L. Harrell, president, and H. M. Parrott, secretary-treasurer.

W. B. Sharp, Homer Chambers and J. D. Crawford.

Beaumont—Manufacturing and Supply Company.—Acme Manufacturing & Supply Co. has been incorporated, with \$15,000 capital, by Ennis M. Nevins, T. C. Creighton and F. C. Smith.

Brownwood—Telephone System.—West Texas Telephone Co. has been incorporated, with \$100,000 capital, by S. H. Woodward, J. A. Walker, H. T. Williams, N. H. Hollingsworth and associates.

Canadian—Cotton Gin and Grist Mill.—Robert Moody, J. F. Johnson, George Gerlock, A. H. Waller and others have incorporated the Canadian Gin & Mill Co. with \$5,000 capital.

Como—Coal-mining.—Como Coal Co. has been incorporated, with \$10,000 capital, to mine and sell coal; incorporators, E. P. McGarity, M. L. Tarien, Theodore Collins, W. H. Arcker, J. J. Mills, E. R. Crone and J. F. Smith.

Corsicana—Mercantile.—W. H. Brennard and others have incorporated the Brennard Conkling Co. with \$27,000 capital.

Corsicana—Implement Company.—Navarro County Implement Co. has been incorporated, with \$15,000 capital, by W. C. Kinsolving, Ben Rosenberg and J. T. Jackson.

Corsicana—Petroleum Company.—Tex-I-can Petroleum Co. has been incorporated with \$50,000 capital by W. J. McKie, H. L. Scales, J. W. Slough and associates.

Dallas—Fuel Briquette.—Texas Briquette Fuel Co. has incorporated, with \$50,000 capital, to manufacture fuel; incorporators, M. W. Mann, M. Mannewitz, A. M. Jones, E. M. Davis and others.

Hansford—Land and Cattle Company.—Charles O'Laughlin, John O'Laughlin and T. T. Downs have incorporated the O'Laughlin Land & Cattle Co. with \$50,000 capital.

Houston—Mercantile.—Incorporated: Dalton, Hayes & Scott Company, with \$30,000 capital, by D. J. Hayes, Crawford W. Waller, Cyrus W. Scott and others.

Houston—Lumber Mill.—C. R. Cummings, W. C. Huff and W. R. Miller have incorporated the C. R. Cummings Export Co., with \$300,000 capital, to manufacture lumber, etc.

Houston—Rice Foods.—Reports state that W. F. Balbridge and W. R. Jones contemplate organizing \$50,000 company to prepare foods from rice and will build plant for canning, cooking and distributing the product.

Houston—Oil Refinery.—Gulf Refining Co. has secured site on which to erect oil refinery.

Houston—Transportation Company.—M. L. Wamock of Houston and W. B. Clint of Elmina, Texas, have incorporated the Elmira & Eastern Transportation Co. with \$10,000 capital.

Jacksboro—Stone Company.—Incorporated: Jacksboro Stone Co., with \$30,000 capital, by R. B. Connell, J. W. Galvin, George Spiller and others.

Laredo—Power-house Improvements.—Laredo Electric & Railway Co. will make extensive improvements to power-house, including the installation of new machinery.

Red Oak—Cotton Gin.—K. L. White, F. J. Wilson and C. R. Rea of Lancaster, Texas, have incorporated the Red Oak Gin & Cotton Co., with \$10,000 capital.

Temple—Mill and Elevator.—Werkblaser & Polk have increased capital from \$35,000 to \$70,000.

Velasco—Glass Factory.—Reports state that R. Bordin, P. O. Box 286, and associates, all of Matthews, Ind., are investigating with a view to establishing window-glass factory.

Walls Station—Milling and Manufacturing Company.—Cowan Milling & Manufacturing Co. has been incorporated, with \$25,000 capital, by R. W. Guyler, E. A. Brandt, H. C. Foster and George B. Lang.

Weatherford—Sewerage System.—City has voted the proposed \$25,000 bond issue for the construction of sewerage system. Address The Mayor.

VIRGINIA

Atkins—Band and Planing Mill.—Glade Mountain Lumber Co., reported incorporated last week with \$200,000 capital, will erect band mill 140x38 feet and planing mill 40x80 feet; C. A. Randolph, engineer in charge.*

Culpeper—Vehicle Works.—E. L. Yancey Carriage Co. has been incorporated, with \$10,000 capital. E. L. Yancey is president; E. M. Yancey, vice-president, and Lewis P. Nelson, Jr., secretary-treasurer.

Martinsville—Electric Lights and Water.—City will vote December 15 on the issuance of \$60,000 of bonds for the purpose of furnishing electric lights and water. Address The Mayor.

Norfolk—Ice and Cold-storage Plant, Ware-

house and Stables.—Anheuser-Busch Brewing Association will expend \$200,000 in improvements, including the erection of four-story brick building to be equipped as ice and cold-storage plant with a daily capacity of 80 tons, brick storage warehouse with a capacity of 10 carloads of bottled beer, stables and a bridge over Roanoke avenue; Widman, Walsh & Boisselier of St. Louis, Mo., architects. Ed. Siemon is local manager.

Richmond—Gasholder.—Stacy Manufacturing Co. of Cincinnati, Ohio, has contract at \$125,000 for the erection of proposed gasholder for the West End to be located at Oak and Monroe streets.

WEST VIRGINIA.

Charleston—Bottling Works.—Rummel Bottling Co. has been incorporated, with \$10,000 capital, by Henry Rummel, George Beller, L. E. Haws, Gus Wilson and J. W. Kennedy, to manufacture and deal in mineral waters, soft drinks, etc.

Clarksburg—Realty Company.—Jacobs-Baily Realty Co. has been incorporated, with \$10,000 capital, by D. W. Jacobs, J. F. Mann, F. C. Devericks and associates.

Huntington—Lumber Company.—West Virginia Lumber Co. has been incorporated, with \$10,000 capital, by C. L. Ritter, H. T. Lovett, Paul W. Scott, R. L. O'Neal and E. E. Williamsburg.

Morgantown—Commission Company.—Henry S. Green, J. H. Stewart, St. George Tucker Booth, Joseph Moreland and others have incorporated the Co-operative Wholesale Exchange, with \$25,000 capital.

Morgantown—Cigar Factory.—Ed. Herd, James S. Stewart, Ernest E. Hayes, R. A. Hayes and M. K. Hayes have incorporated the State Cigar Co., with \$10,000 capital.

Northfork—Bottling Works.—C. W. Elliott Company has been incorporated, with \$15,000 capital, by C. W. Elliott, George L. Dillard, C. S. Angel, J. B. Harris and L. G. Toney, to manufacture and sell soft drinks and carbonized beverages.

St. Albans—Bridge.—William C. Sproul of Chester, Pa., and associates, owning a half interest in the Coal River & Western Railway, operating a line from St. Albans up Coal river to Briar creek, contemplate building a bridge across Coal river at the Forks.

West Virginia—Coal-mining.—It is reported that B. J. Clay, a mining engineer of Pittsburgh, Pa., will investigate and make a report on a tract of coal land in West Virginia which Pittsburg parties propose developing.

Wheeling—Pipe Line.—Louis Sax has contract to construct five miles of gas-line extension for the Virginia Oil & Gas Co., previously reported; cost \$80,000.

INDIAN TERRITORY.

Chelsea—Oil and Land Company.—H. A. Jamieson, E. E. Allen and others have incorporated the Delaware Oil & Land Co.

Coalgate—Electric-light Plant.—City has granted 20-year franchise to the Coalgate Company to erect and operate electric-light plant.

Purcell—Light and Power Company.—Hobart Light & Power Co. of Purcell and Hobart, O. T., has been incorporated, with \$50,000 capital, by Dorsett Carter of Purcell, Frederick A. Gale of Chicago, Ill., and George D. Seldon of Erie, Pa.

South McAlester—Furniture Company.—R. L. Landes, W. R. McClure, J. D. Humphrey and W. R. McClure, Jr., have incorporated as Landes, McClure & Co. with \$10,000 capital.

Vinita—Printing Company.—F. S. E. Amos, Natalie Warren and Ray M. McClintock have incorporated the Leader Printing Co., with \$10,000 capital.

OKLAHOMA TERRITORY.

Enid—Ice and Cold-storage Plant.—Reports state that the Baden Produce Co. will erect 25-ton ice and cold-storage plant on site recently purchased.

Guthrie—Electric-light Plant.—Guthrie Electric Light & Power Co., incorporated with \$150,000 capital to succeed the local electric-light and gas company, has applied to city for 30-year franchise, and will rebuild entire system if franchise is secured.

Guthrie—Mining Company.—Indian Hill Hydraulic Mining Co. of Guthrie and San Francisco, Cal., has been incorporated, with \$1,000,000 capital, by G. V. Pattison of Guthrie, S. S. Havermale and W. E. von Johansen of San Francisco, Cal.

Oklahoma City—Development Company.—P. E. Dunn, F. E. Dunn and E. N. Taylor have incorporated the Mexican Producing & Developing Co., with \$150,000 capital.

Oklahoma City—Plow Works.—Riverside Self-Sharpening Plow Co. has purchased site on which to erect factory building.

Oklahoma City—Electric and Gas Plant.—Oklahoma Gas & Electric Co. has reorganized with C. B. Ames, president, and D. T. Flynn, secretary. Company was previously reported as having engaged H. M. Bylesby & Co., New York Life Building, Chicago, Ill., as engineers in charge of extensive improvements to be made to electric and gas plants.

Oklahoma City—Flooring Company.—International Stock Car Flooring Co. has been incorporated with G. H. Turnbull president; G. L. Rockwell, vice-president and general manager, and E. J. Turnbull, secretary-treasurer.

BURNED.

Austin, Texas.—Austin Canning Factory; loss \$20,000.

Chattanooga, Tenn.—Mountain City Store & Manufacturing Co.'s plant; loss \$35,000.

Columbia, S. C.—Hazell-Thomas Company's lumber plant.

Crawfordsville, Ark.—S. O. Boone's cotton gin; loss \$2500.

Cumberland, Md.—Casselmann Planing Mill, operated by D. A. Friedline; loss \$7000.

Elgin, S. C.—George F. Ferguson's cotton gin, barns, stables, etc.

Fayetteville, Ga.—John L. Crane's cotton gin.

Gaylesville, Ala.—Chestnut & Russell's cotton gin.

Madison, Fla.—J. B. Thomas' cotton gin; loss \$5000.

Opelika, Ala.—Garey G. Mitchell's cotton gin; loss \$3500.

Pembroke, Ga.—W. C. Danen's cotton gin; loss \$2000.

Roxton, Texas.—A. T. Wight's cotton gin; loss \$10,000.

Sardis, Miss.—Panola county's courthouse. Address County Judge.

Shades Creek (P. O. Oxmoor), Ala.—Snyder & Williams' saw-mill; loss \$1500.

Shreveport, La.—Texas & Pacific Railway Co.'s oilhouse. B. S. Walthein, Dallas, Texas, is chief engineer.

Tazewell, Va.—Central Hotel; loss \$8000.

Tifton, Ga.—The Tifton Knitting Mills; equipment, 53 machines.

Union City, Tenn.—Union City Cooperage Co.'s plant; loss \$6000.

Wadesboro, N. C.—Hill Ginning Co.'s cotton gin; loss \$400.

Waldo, Texas.—J. M. McIlhenny's cotton gin; loss \$3500.

Walnut Ridge, Ark.—Mrs. Gussie Less' cotton gin; loss \$10,000.

Waterloo, Ala.—T. Emerson's cotton gin.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Bayou Sara, La.—Dwelling.—E. Murray has contract to erect proposed \$7500 residence for John F. Irvin.*

Beaumont, Texas—Warehouse.—W. C. Whitney has contract to erect galvanized-iron rice warehouse, having a floor space of 132x166 feet, for the Beaumont Rice Mills.

Berkeley Springs, W. Va.—Hotel.—Reports state that A. R. Unger, George Biser of Berkeley Springs and Charles P. Jack of Winchester, Va., contemplate erecting \$50,000 hotel.

Bessemer, Ala.—Warehouse.—J. C. Curry & Co. are erecting warehouse, 50x120 feet, of concrete and brick.

Biloxi, Miss.—Postoffice, etc.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids December 14 for the construction complete of the United States postoffice, courthouse and custom-house at Biloxi in accordance with drawings and specifications, copies of which may be had at the office of the supervising architect or at the office of postmaster, Biloxi, Miss., at the discretion of the supervising architect.

Birmingham, Ala.—Dwelling.—J. M. Anderson & Co. have contract for two-story residence reported last week to be erected by W. H. Graves; structure to be two stories, stucco or pebble-dash and cost \$15,000. Chas. & H. B. Wheelock prepared the plans.

Birmingham, Ala.—School Building.—Plans by Breeding & Whilden have been accepted for four-story brick and stone school building previously reported to be erected at a cost of \$125,000; Dr. J. H. Phillips, school superintendent.

Cedartown, Ga.—Business Building.—Sonny

Clay has contract to erect proposed fireproof business building for John F. Stone and John H. Phillips.

Chattanooga, Tenn.—Church.—Christ Episcopal Church is having plans prepared for the erection of \$5000 edifice. Address The Pastor.

Dallas, Texas—Store Building.—M. P. Exline Co. will erect five-story building 53x100 feet.

Dallas, Texas—College Building.—Southwestern Medical College will erect \$75,000 college building; Dr. Robert S. Hyer, regent.

Dallas, Texas—Business Building.—Emerson Manufacturing Co. will erect five-story brick addition. John M. Wendelken is local manager.

Dallas, Texas—Building.—H. A. Overbeck, architect, Room 510, Slaughter Building, Dallas, will open bids November 11 for the erection of a one-story brick building for the Southwestern Telegraph & Telephone Co. Separate bids will be received for plumbing, heating and wiring. Plans and specifications on file at architect's office. Usual rights reserved.

Dallas, Texas—Business Building.—C. A. Gill & Son have completed plans for three-story building previously reported to be erected by Parks & Willingham.

Dyer, Tenn.—Depot.—It is rumored that the Mobile & Ohio Railroad Co. will erect brick depot, 30x70 feet, to replace structure recently burned. G. W. McGeehe is superintendent of bridges and buildings.

Gadsden, Ala.—City Hall.—C. D. Clarke, city clerk, will receive bids until November 10 for the erection of city hall. Forms of proposals, copies of specifications, instructions to bidders may be obtained and copies of plans and profiles seen at office of A. D. Simpson, architect, Gadsden. Certified check for \$50 must accompany each bid. Usual rights reserved.

Glencoe, Md.—Dwelling.—Jacob L. Fowble of Cockeysville, Md., has contract to erect proposed \$5000 residence for Dickinson Gorsuch.

Granger, Texas—School Building.—City will vote December 9 on the bond issue previously reported for the erection of brick school building. Address The Mayor.

Greensboro, N. C.—Library Building.—W. C. Bain has contract at \$22,947 for the erection of Carnegie Library building previously reported.

Guthrie, O. T.—Business Building.—J. F. Brickner has contract to erect two-story building, 25x55 feet, for Charles McNulty, reported last week.*

Hampton, Va.—Barn.—Hampton Normal and Agricultural Institute will rebuild barn recently burned.

Houston, Texas—Church.—Shearn Methodist Church contemplates erecting \$100,000 edifice. Address The Pastor.

Jackson, Miss.—Fire Station.—G. T. Hallis & Co. of Brookhaven, Miss., have contract at \$13,100 for the erection of proposed three-story building for fire department.

Jacksonville, Fla.—Store Building, Warehouse and Wharf.—Consolidated Grocery Co. will erect seven-story store building, 70x210 feet, costing \$150,000; three-story brick warehouse, 70x90 feet, costing \$80,000, and wharf 90 feet wide and extending 400 feet into the river at a cost of \$50,000. W. P. Richardson has contract for the store building.

Jacksonville, Fla.—Business Building.—Realty Title & Trust Co. is having plans prepared for the erection of three-story brick business building.

Jacksonville, Fla.—Business Building.—W. B. Camp has completed plans for Brinkley & Banes' proposed three-story brick building, 105x80 feet.

Kansas City, Mo.—Store Building and Warehouse.—W. L. Shelton will erect four-story brick building, 64x140 feet, and warehouse at a cost of \$25,000.

Knoxville, Tenn.—Building.—G. T. Galyon has contract to erect building for Sam H. McNutt after plans by Leon Beaver.

Lake Village, Ark.—Courthouse.—Reports state that Chicot county contemplates erecting courthouse. Address County Judge.

Louisville, Ky.—McDonald & Shebliesky have prepared plans for proposed residence for Isaac Farmer, Jr.

Louisville, Ky.—Dwelling.—Wm. Fitch has had plans prepared by Maury & Hillerich for the erection of proposed residence.

Louisville, Ky.—Dwelling.—J. B. Hutchings and H. F. Hawes have completed plans for Allison Graves' proposed residence.

Louisville, Ky.—Flat Building.—D. X. Murphy & Bro. have prepared plans for proposed Caperton flat building.

Macon, Ga.—Opera-house and Office Build-

ing.—Henry Horne, L. DeGivé & Sons and associates have had plans prepared by Architect Gunn for the erection of seven-story building previously reported. Structure to be of brick and stone, have electric elevators, and be used as opera-house, lodge and office building.

Madison, Ala.—Residence.—Frank G. Heltzer has purchased site on which to erect dwelling.

Mangum, O. T.—School Building.—L. F. Lee of Oklahoma City, O. T., has contract to erect \$20,000 school building previously reported.

Memphis, Tenn.—Institution Buildings.—Trustees of the Shelby County Industrial and Training School are having plans prepared by Alsop & Woods for the erection of proposed \$15,000 building.

Minden, La.—Church.—Catholic congregation is arranging for the erection of church building. Mrs. G. Dupuy, president building committee, can be addressed.

New Orleans, La.—Brewery Depot.—Bids will be received until November 20 at the Mechanics, Dealers and Lumbermen's Exchange for the erection of proposed two-story brick depot for the Anheuser-Busch Brewing Association, after plans by Widmann, Walch & Boisselier; cost \$10,000.

Opelousas, La.—Business Block.—Jacobs' News Depot Co. has purchased site at \$10,000 on which to erect business block.

Oxford, Ga.—Gymnasium.—Emory College will erect gymnasium building, 60x100 feet, at a cost of \$10,000. Steam heat will be installed. Dr. Dickey is president.

Pensacola, Fla.—Warehouse.—Gulf Transit Co. is arranging for the erection of its proposed warehouse on Central wharf.

Roanoke, Va.—Building.—J. J. Boxley is erecting building of concrete block with concrete foundation and slate roof at a cost of \$4500.

Roland Park, Md.—Dwelling.—Mrs. Edwin White will erect dwelling after plans and specifications by Ellicott & Emmart, architects, 323 North Charles street, Baltimore, Md.; structure to be two stories high with attic, 40x62 feet; frame construction with stucco exterior, stone foundation, shingle roofing, electric wiring and fixtures, sanitary plumbing, steam or hot-water heating system. A. F. West, 217 South Gilmor street; Gladfelter & Chambers, Woodberry; M. C. Davis, 140 West Fayette street, and McIver & Piel, Builders' Exchange Building, 2 East Lexington street, all of Baltimore, Md., and the Roland Park Co., Roland Park, Md., have been selected to estimate on the construction. Bids to be in November 14.

Sherman, Texas.—Church.—G. P. Webb, chairman building committee, Sherman, will open bids November 12 for furnishing material and construction of church for the Central Christian Congregation, in accordance with plans and specifications on file with J. E. Flanders, architect, Dallas, Texas, and R. R. Dulin, Sherman. Bid separately on following: Lumber bill furnished by chairman on application; hardware, except metal roof, as carpenter work; plumbing, lighting and heating, mill work, all as per plans and specifications.

Tryon, N. C.—Hotel Improvements.—F. E. Hellen, proprietor Oak Hall Hotel, is having plans prepared by Architect Smith of Asheville, N. C., for the erection of addition.

Valdosta, Ga.—Engine-house.—W. E. Boothe has contract at \$4803 for the erection of two-story brick and stone engine-house 50x67 feet, previously reported.

Valdosta, Ga.—Lodge Building.—Local lodge of Elks contemplates erecting \$30,000 lodge building and opera-house.

Waco, Texas.—Lodge Building.—Local lodges Knights of Pythias will erect two-story brick lodge building.

West Palm Beach, Fla.—Store Building.—R. B. Spratt will erect store building.

Winnboro, Texas.—Church.—W. E. Beggs, secretary building committee, Winnboro, Texas, will open bids November 19 for the erection of brick edifice for the Baptist Church. Plans and specifications can be seen at Attorney Nabors' office, Winnboro, and at office of George Lindsey, architect, Greenville, Texas. Certified check for \$200 must accompany each bid.

RAILROAD CONSTRUCTION.

Railways.

Abilene, Texas.—A citizens' meeting has appointed a committee to raise a bonus of \$60,000, with right of way through the county, for the proposed Colorado, Texas & Mexico Railroad, in which Morris R. Locke and others of Abilene are interested. The projected line is from Haskell to Coleman or Ballinger.

Alcolu, S. C.—President R. J. Alderman of the Alcolu Railroad Co. writes the Manufacturers' Record that a three-mile extension is being built from Hudsons to Beulah Post-office, Bethlehem. It is expected to complete the line about January 1. This will make 25 miles of road from Alcolu to Beulah. One or two spur tracks may be built later.

Ansted, W. Va.—The Deepwater Railway Co., which has 85 miles of line under construction between the Bluestone and Kanawha rivers, has laid 10 miles of track with 85-pound steel rails. Mr. William N. Page, chief engineer, writes the Manufacturers' Record that 50 additional miles of construction is 95 per cent. complete and will be ready for track within 30 days, with the exception of the tunnel at Jenny's Gap. Construction of the remainder will be pushed as vigorously as possible.

Atkins, Va.—Mr. Carlton A. Randolph of the Glade Mountain Lumber Co. informs the Manufacturers' Record that the Glade Mountain Railroad is completed for four miles into a thickly populated valley and is part of the lumber company's proposition. Mr. Randolph is engineer in charge.

Bainbridge, Ga.—The Georgia, Florida & Alabama Railroad will, it is reported, build an extension from Havana to Quincy, Fla. A mortgage to secure \$1,100,000 of improvement and equipment bonds has been filed. J. Bonnyman is chief engineer at Bainbridge.

Belton, Texas.—The Belton-Temple Traction Co. has run its first car between Temple and the power-house, which is half way between Belton and Temple.

Bennettsville, S. C.—The Cheraw & Bennettsville Railway Co. has given notice of an amendment to its charter to build a line from Bennettsville to the South Carolina boundary, where it is intersected by the Carolina Northern Railroad and Murrell's

Cedartown, Ga.—The Seaboard Air Line's Birmingham extension is now reported completed, including grading and tracklaying, except for five miles. The last of the tunnels has been cut through, and it is expected that trains will run into Birmingham by December 1.

Cedartown, Ga.—It is reported that Anniston (Ala.) parties are interested in the plan to build a railroad from Alexandria, Ala., to connect with the Seaboard Air Line's Birmingham extension, near the Coosa river. About four miles are already built, and six or eight miles additional would be required. L. B. Parsons, superintendent of the Seaboard at Cedartown, may be able to give information.

Chattanooga, Tenn.—W. G. M. Thomas of the Chattanooga Company is reported as saying that in all probability one of two railroad companies will build a line 20 miles long to reach coal fields near Hill City.

Chicago, Ill.—J. T. Harahan, second vice-president of the Illinois Central, is reported as saying that the Yazoo & Mississippi Valley line will build an extension to reach the State Farm, two miles west of Parchman, Miss. A. S. Baldwin is engineer of construction.

Chicago, Ill.—The Northern Texas Construction Co., which is to build the proposed railroad from Amarillo, Texas, towards San Antonio, Texas, has organized by electing officers as follows: C. L. Tallmadge, president; E. C. Gordon, first vice-president; E. R. Tallmadge, second vice-president; Daniel C. Buntin, secretary and treasurer. The directors are the officers and E. B. Stahlman, J. E. Caldwell and L. Gough. Office in the Railway Exchange Building, Chicago, Ill., and the Arcade Building, Nashville, Tenn. The Northern Texas Townsite & Land Co. has also been organized with the same officers and directors.

The Rebuilding of Baltimore---How the Daily Bulletin is Covering It.

Could Not Be Excelled.

E. L. HERTZOG.
713 W. Fayette St., Baltimore, Md.

Baltimore, Md., May 27, 1904.

Manufacturers' Record Publishing Co.:

Gentlemen—For the past six weeks I have been a close reader of your *Daily Bulletin*, and take pleasure in saying that not once have I discovered a misstatement in the Baltimore Building Notes. In accuracy and completeness I don't think they could be excelled.

Yours truly,

E. L. HERTZOG.

Inlet. J. A. Drake of Bennettsville is president and J. F. Everett secretary.

Birmingham, Ala.—Col. J. A. Montgomery and others are reported to be interested in a plan to build about 35 miles of railroad connecting Leeds, Ala., Gadsden, Ala., and other points. Pitt S. Milner of Birmingham is said to be surveying near Rock Springs and Moody for the line.

Birmingham, Ala.—Col. A. J. Montgomery, engineer in charge of the survey, is working on the line for the proposed Mobile & Western Alabama Railroad, which is to build a low-grade line between Birmingham and Mobile, Ala. It is said to be probable that the line will be extended northward from Birmingham to Huntsville and Florence. It is also reported that a contract has been made with a construction company in New York to build the line.

Bristol, Tenn.—The purpose of the Virginia & Southeastern Railway Co. (not Virginia & Southwestern, as at first reported), chartered in Virginia by Henry K. McHarg, John B. Newton and others interested in the Virginia & Southwestern Railway, is stated to build a line from some point on the latter road between Bristol and Appalachia to a point near Sandy Ridge, Va. The charter permits the line to be from 30 to 500 miles long, and it is believed that the road will connect with the proposed Tidewater Railway. John B. Newton is vice-president and general manager of the Virginia & Southwestern Railway at Bristol.

Brookhaven, Miss.—The Brookhaven & Pearl River Railroad charter has been approved by the governor. The line is already completed from Brookhaven to Nolan, but it is to be completed to Monticello, and it is expected to be finished by December 1. The incorporators are D. J. Bachelder, Jr., S. E. Morton, Joseph Joles, S. J. Carpenter, Brookhaven; C. S. Rose and J. Hackney, Pearl Haven.

Cincinnati, Ohio.—President C. W. Cole of the Burnside & Cumberland River Railway Co. writes the Manufacturers' Record that it has just completed an extension one mile long at Burnside, Ky., and has established a dock on the Cumberland river. The line operates in connection with the Burnside & Burkesville Transportation Co., which has vessels on the river.

Cincinnati, Ohio.—C. R. Brewer of the Cincinnati Oil Co. is reported to have sold to Lewis A. Hall and A. E. Perren, both of New York, oil and coal lands in the eastern part of Kentucky, where they will build a railroad.

Des Moines, Iowa.—F. M. Hubbell will, it is reported, remove to Beaumont, Texas, to supervise plans for a railroad from Galveston to Dallas; this in connection with Gulf & Interstate Railroad, in which he is interested.

Elkins, W. Va.—E. F. Kinnear of Hoover, Kinnear & Co., contractors, is reported as saying that the firm has nearly completed the general construction work on the Coal & Coke Railway in Lewis county.

Enid, O. T.—The Denver, Enid & Gulf Railroad will, it is reported, build an extension from Guthrie, O. T., via South McAlester, I. T., to Shreveport, La., about 300 miles. E. L. Peckham is vice-president and general manager at Enid.

Galveston, Texas.—The full list of incorporators of the Peach River & Gulf Railway, the charter of which has just been filed for the purpose of building a railroad from Willis, Texas, to Beaumont, Texas, about 100 miles, is as follows: A. W. Miller, C. S. Vidor, R. Waverley Smith, B. I. Sparks, C. H. Moore, Maco Stewart, all of Galveston; James G. Berryhill of Des Moines, Iowa; W. S. Slagle, S. A. Lincoln, E. S. Henrich of Alton, Ill.; M. M. Riner of Timber, Texas.

Greenwood, Miss.—It is reported that Capt. W. E. Johnson, civil engineer, with a corps

of assistants, is about to begin work on the final survey for the proposed electric interurban line from Greenwood to Black Hawk and Itta Bena.

Houston, Texas.—Concerning the report that the Galveston, Harrisburg & San Antonio Railway (Southern Pacific system) would build a cutoff from Beeville to Spofford, Texas, an official writes the Manufacturers' Record that he knows nothing of such a line.

Kansas City, Mo.—The vote for bonds of the Kansas City, Mexico & Orient Railway is reported carried by large majority in Chelsea, Sycamore and Eldorado townships of Butler county, Kansas, and it is expected that grading will soon begin, some of the rights of way having already been acquired. M. P. Paret is chief engineer at Kansas City.

Knoxville, Tenn.—W. J. Oliver & Co. of Knoxville have, it is reported, been awarded a contract to build the larger branch of the Norfolk & Western Railway, consisting of heavy work in a mountainous region. It is also reported that the firm has a contract for a line in Kentucky, involving the handling of 1,000,000 cubic yards of earth. This is supposed to be for an extension of the Southern Railway.

Louisville, Ky.—The Louisville & Nashville Railroad will, it is reported, build a branch several miles long from the Atlanta, Knoxville & Northern road to Maryville, Tenn. It is also rumored that the company contemplates building an extension from a point in Georgia to Chattanooga, Tenn., parallel with the Atlantic & Western Railroad. R. Montfort is chief engineer at Louisville.

Lufkin, Texas.—P. A. McCarthy of Lufkin will, it is reported, make a survey for an extension of the Texas Southeastern Railroad from Diboll, Texas, 12 miles toward the Neches river. W. J. Raef is general manager at Diboll, Texas.

Marshall, Texas.—The Gulf, Texas & Northern Railway has been granted a charter to build its proposed line from a point on the Gulf of Mexico near Sabine Pass, Texas, to a point near the Oklahoma boundary, about 250 miles. The incorporators are M. Scully, W. L. Martin, Jacob Wiseman and A. B. Blocker of Marshall and S. Smart, H. C. Robinson and R. W. Caraway of Logansport, La.

McKinney, Texas.—The permanent survey for the proposed electric railway between McKinney and Bonham is reported complete. It touches Valdosta, Blue Ridge, Moreland, Nobility, Klondike, Trenton, Randolph and Edhube, as well as the two terminal points.

Nashville, Tenn.—The reduction of grade on the Nashville, Chattanooga & St. Louis Railway at Mile Post No. 29 will, it is reported, be finished sometime in December.

Nashville, Tenn.—The Tennessee Central Railroad is reported to be building a branch from Ozone to mines of the Tennessee Coal & Lumber Co. It will be about four miles long. W. J. Oliver & Co. of Knoxville are the contractors. Other coal spurs are to be constructed in the same region.

New Orleans, La.—Mr. James W. Porch, president pro tem. of the Public Belt Railway Commission, is reported as saying that a corps of engineers will be employed to make a survey and give estimates of the cost of construction. Electricity may be used as motive power on the proposed belt road.

Oklahoma City, O. T.—President F. N. Finney of the Missouri, Kansas & Oklahoma Railroad is reported as saying that the lines will be improved and ballasted with stone, but that no action has been taken about an extension to Texas.

Parkersburg, W. Va.—With reference to the report that construction would soon be resumed, S. D. Brady, chief engineer of the projected Buckhannon & Northern Railroad, a Wabash proposition, is quoted as saying that there is no immediate prospect of resuming work, which was suspended January 1 last.

Perryville, Mo.—The Chester, Perryville & St. Genevieve Railway has operated its first train into Jackson, Mo. Louis Houck is building the line, and J. C. Houck is superintendent.

Philadelphia, Pa.—C. A. Sims & Co. of Philadelphia have, it is reported, been awarded a contract for grading, tracklaying and masonry on the Philadelphia, Baltimore & Washington Railroad of the Pennsylvania system from Principio, Md., to the Susquehanna river, and from the Susquehanna river to Oakington, Md., this being to make the change of line necessary to reach the new bridge which is to be constructed. Material and machinery are already being assembled on the ground.

Plant City, Fla.—Col. C. A. Denman, president of the Peninsular Telephone Co., is reported to be working on a plan for an elec-

tric railway between Plant City and Tampa. He is quoted as saying that there is ample capital for the project.

Purcell, I. T.—The Canadian Valley & Western Railway, chartered several weeks ago to build a line from Coalgate, I. T., to Clinton, O. T., 190 miles, will, it is reported, pass through Tupelo, Purcell, Chickasha and Weatherford. From Tupelo to Ada, 25 miles, the surveys are reported complete, and engineers are now at work from Ada to Chickasha; maximum grade .5 per cent. and maximum curvature 4 degrees. Dorset Carter of Purcell is president, and R. L. McWillie is chief engineer.

Quitman, Miss.—The Mississippi & Eastern Railroad is reported finished and in operation from Quitman to Melvin, Ala., 20 miles. J. W. Glynn of Quitman is chief engineer.

Raleigh, N. C.—The Raleigh & Cape Fear Railroad has recorded a mortgage to secure \$30,000 of 6 per cent. equipment and improvement bonds. John A. Mills is president.

Raleigh, N. C.—Work is being rapidly pushed on the Raleigh & Pamlico Sound Railroad, track having been laid from the Raleigh junction with the Seaboard Air Line near the Pilot Mills to Morris creek.

Richmond, Va.—The Chesapeake & Ohio Railway is reported to have finished that part of its Big Sandy extension lying between Whitehouse, Ky., and Prestonsburg, Ky. It is expected to complete it as far as Pikeville by January 1, and the entire line from Whitehouse to Elkhorn City, Ky., by some time next spring. F. I. Cabell is engineer of construction, and Langhorne, Johnson & Co., also of Richmond, are the contractors.

Savannah, Tenn.—Jeff Ross, one of the incorporators of the proposed Savannah, Shiloh Park & Corinth Railway, writes the Manufacturers' Record that the plan is soon to be pushed to completion. The distance from Corinth to Shiloh Park is 18 miles; from there to Pittsburg Landing four miles, to Savannah seven miles farther, and from the latter place to Allen's creek 40 miles. Engineering difficulties are few. The Tennessee river will be crossed at the head of low-water navigation.

Sedalia, Mo.—Col. A. L. Strang, president of the Missouri & Iowa Southern Railway Co., which proposes to build a standard-gauge line 52 miles long from Sedalia via Marshall to Miami, is reported as saying that he has succeeded in securing capital to build the road.

Sedalia, Mo.—Col. A. L. Strang, president Missouri & Iowa Southern Railway Co., informs the Manufacturers' Record that arrangements have not yet been completed for building its proposed line from Sedalia via Marshall to Miami.

Savannah, Ga.—Engineers are reported to be surveying a line for the Central of Georgia Railway from Green's Cut to Jonesville or from Waynesboro to Louisville, Ga. H. M. Steele is chief engineer at Savannah.

St. Augustine, Fla.—The Florida East Coast Railway will, it is reported, build a branch from Orange City to Deland, Fla., 10 miles. J. R. Parrott is general manager.

Stearns, Whitney County, Kentucky.—Mr. R. L. Stearns, secretary of the Kentucky & Tennessee Railroad, informs the Manufacturers' Record that the company is building a line from Barthel, the western terminal, to the Big South fork of Cumberland river, about nine-tenths of a mile. It is also building an extension of about three miles from the mouth of Paunch creek on the Big South fork north to Rock creek. While this is merely temporary, it may become permanent.

St. Louis, Mo.—According to a report from New Orleans, President A. J. Davidson of the St. Louis & San Francisco Railroad has approved plans for the Chalmette terminals at New Orleans, and also for the new depot in the city. These improvements will cost near \$2,000,000. J. F. Hinckley is chief engineer at St. Louis.

St. Louis, Mo.—The Frisco system is again reported to be seeking rights of way for a line from Memphis, Tenn., to Gulfport, Miss., via Indianola, Miss. Other points on the route are Matson, Bolton and Crystal Springs. J. F. Hinckley is chief engineer of construction.

Townsend, Blount County, Tennessee.—Mr. W. B. Townsend, general manager of the Little River Railroad Co., writes the Manufacturers' Record that the Little River Lumber Co. is now building about seven miles of railroad in the mountains in Blount county.

Tullahoma, Tenn.—Charles E. Dyer is reported to be representing Chicago capitalists, who desire to build an electric railway for freight and passengers from Tullahoma to Lynchburg, Tenn., 14 miles.

Washington, D. C.—It is reported that a

horseback survey has been completely made of the Southern Railway's new branch from Greenwood to Belzoni, Miss., and that a corps of engineers will establish the permanent lines during this month.

Wilmington, N. C.—The purchase of the Macon, Dublin & Savannah Railroad in the interest of the Atlantic Coast Line will, it is reported, be followed by the building of a connecting link with the Georgia Railroad, which is controlled by the Atlantic Coast Line. E. B. Pleasants is chief engineer of the Atlantic Coast Line at Wilmington.

Street Railways.

Americus, Ga.—A Rhode Island company is reported to have submitted a proposition to the city council for building an electric railway.

Hattiesburg, Miss.—It is reported that application for an electric street-railway franchise will be made to the mayor and aldermen by F. W. Foote, cashier of the National Bank of Commerce; George L. Hawkins, president of the First National Bank, and F. F. Phelepps, cashier of the Citizens' Bank.

Johnson City, Tenn.—The Johnson City Traction Co. will, it is reported, build an extension of about half a mile to the Carnegie Hotel.

Knoxville, Tenn.—The Knoxville Traction Co. has, it is reported, begun construction of the extension of the Oak-avenue line.

Muskogee, I. T.—Ira L. Reeves, president of the Muskogee Electric Traction Co., is reported as saying that most of the right of way has been obtained for the line from Muskogee to Grand river, 10 miles, for which contract has been let to H. M. Byllesby & Co. of Chicago, Ill. Grading has been done for half a mile.

Savannah, Ga.—The Savannah Electric Co. will, it is reported, spend over \$100,000 in improvements, including the laying of new rails. L. R. Nash is manager.

Sedalia, Mo.—The Sedalia Transit Co. has been incorporated to build a street railway to be operated by electricity. The officers are H. S. Rumsey, president; Joseph Clark, vice-president, both of St. Louis; W. H. Powell, of Sedalia, secretary and treasurer.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Agricultural Implements.—See "Corn Mill," Air Compressors.—See "Mining Equipment."

Asphalt Machinery.—E. L. Ralls, secretary Union Asphalt Mining & Refining Co., Oklahoma City, O. T., is in the market for complete plant for refining 50 tons per day of asphalt from crude sand, and desires to correspond with manufacturers.

Boiler.—The Britton Lumber Co., Lakewood, Fla., is in the market for one 80-horse-power boiler. (See "Engine and Boiler.")

Boiler.—Peacock's Iron Works, Selma, Ala., wants prices on a 100 and 150-horse-power water-tube boiler.

Boiler.—See "Engine and Boiler."

Boilers.—See "Engines and Boilers."

Boilers.—See "Engines and Boilers."

Boilers and Boiler Specialties.—Henry M. Warren Company, 1302 Walnut street, Philadelphia, Pa., wants four high-pressure tubular boilers 100 horse-power each, two boiler-fed pumps and two boiler injectors for boilers.

Brick Machinery.—Edward T. Dorcus, Port Deposit, Md., wants addresses of manufacturers of brick machinery.

Building Equipment and Supplies.—Chas. McNulty, Guthrie, O. T., will be in the market for steel ceiling.

Cannery Equipment.—Memphis Canning Co., Jeffersonville, Ind., wants prices on machinery and equipment for canning factory.

Coffin Factory.—C. W. Young, Ripley, Miss., wants machinery and equipment for coffin factory.

Conveyor.—See "Fruit-carrier."

Corn Mill.—G. W. Frazier, Lexington, Tenn., is in the market for corn mills, corn shellers, cleaners and shuckers.

Cotton-gin Equipment.—L. A. Brittain, Portia, Ark., will probably be in the market for complete outfit for three or four-gin stand.

Creamery Equipment.—Memphis Canning Co., Jeffersonville, Ind., wants prices on machinery and equipment for creamery and cheese plant.

Drilling Machinery.—Henry M. Warren Company, 1302 Walnut street, Philadelphia, Pa., is in the market for one Keystone driller, and desires full and complete description, with lowest cash price.

Electrical Machinery.—Memphis Canning Co., Jeffersonville, Ind., wants prices on electrical machinery and equipment.

Electric-light Plant.—J. B. Winslett, city secretary, Dallas, Texas, will receive bids until December 6 for lighting the city, as follows: To furnish the city on a contract for five years 350 to 600 electric arc lights, moon-light and all-night schedule each; also plans and specifications for a lighting plant for the city with a capacity of from 500 to 1000 arc lights; also separate bids for putting in the power plant, the lighting machinery, the poles and lines and the lamps, etc., therefor. (This item was referred to last week.)

Electric-light Plant Equipment.—Oconee Water, Light & Power Co., Walhalla, S. C., wants machinery for 40 to 50 arc lights and 2000 incandescent lights. (See "Water-works Equipment" and "Water-power Machinery.")

Electric-light Plant.—Graceville Electric Light & Water Co., Marianna, Fla., wants to correspond with an engineer relative to the erection of electric-light plant and water-works.

Electric-light Plant.—Glade Mountain Lumber Co., Atkins, Va., is in the market for electric plant for lighting mill.

Engine.—Fidelity Manufacturing Co., Charlotte, N. C., wants a good second-hand 20 to 25-horse-power horizontal engine suitable for driving a dynamo.

Engine.—E. S. Broadus & Co., Monticello, Ga., are in the market for an engine.

Engine and Boiler.—The Britton Lumber Co., Lakewood, Fla., is in the market for one 80-horse-power engine and one 80-horse-power boiler.

Engine and Boiler.—Memphis Canning Co., Jeffersonville, Ind., wants prices on engines and boilers.

Engine and Boiler.—L. A. Brittain, Portia, Ark., will probably be in the market for engine and boiler.

Engines and Boilers.—Sumter Merry-Goround Co., Sumter, S. C., wants prices on 15 to 20-horse-power upright engines and boilers, double cylinder.

Excelsior Machinery.—Hinton Ginning Co., Hinton, O. T., wants addresses of manufacturers of machines for making excelsior, also addresses of dealers in excelsior.

Feed Mill.—W. P. Reckord, Cockeysville, Md., wants prices on complete outfit for feed and meal mill.

Forgings.—Edward I. Frost, Salisbury, N. C., wants addresses of manufacturers of drop forgings.

Foundries.—See "Forgings."

Fruit-carrier.—Conkling Mill, Box & Lumber Co., Dallas, Texas, is in the market for a fruit-carrier.

Furniture.—Tupelo Mercantile Co., Tupelo, Miss., wants catalogues from furniture manufacturers.

Furniture-factory Equipment.—C. W. Young, Ripley, Miss., wants machinery and equipment for furniture factory.

Grist Mill.—L. A. Brittain, Portia, Ark., will probably be in the market for grist mill.

Hardware.—Tupelo Mercantile Co., Tupelo, Miss., wants catalogues of agricultural implements, cutlery, wheelbarrows, trace chains, hames, brick bond, collar and collar pad, and all kinds of hardware.

Heating Apparatus.—John F. Irvin, Bayou Sara, La., wants prices on steam-heating apparatus for residence.

Holisting Engines.—Henry M. Warren Company, 1302 Walnut street, Philadelphia, Pa., is in the market for two holisting engines, 30 horse-power each. State full and complete description, with lowest cash price.

Hydro-extractor.—Spray Woolen Mills, Spray, N. C., is in the market for a second-hand hydro-extractor; Solhurst preferred.

Injectors.—See "Boilers and Boiler Specialties."

Levee Construction.—J. E. Little, president, and J. W. James, secretary, Levee District No. 1, Faulkner county, Conway, Ark., desires bids on a levee about five miles long and con-

sisting of about 80,000 cubic yards; a lock and floodgate requiring about 700 cubic yards of concrete; plans and specifications furnished on application.

Lumber.—Benjamin F. Padgett Wagon Works, Laurel, Miss., is in the market for oak, hickory and ash lumber.

Lumbering Equipment.—J. R. Saunders, Pensacola, Fla., is in the market for a skidder or pullboat machinery for pulling out cypress logs.

Machinery and Supplies.—Martin & Myers, Klein Building, Meridian, Miss., want to correspond with a few manufacturers who may want to be represented in their territory.

Machine Tools.—See "Wagon-working Machinery."

Machine Tools.—E. S. Broadus & Co., Monticello, Ga., are in the market for lathes, drill presses, emery stands and general equipment for machine shop.

Mining Equipment.—Kentucky Mining & Development Co., Louisville, Ky., wants prices on mining machinery and equipment, compressors, concentrators, etc.

Mining Equipment.—Henry M. Warren Company, 1302 Walnut street, Philadelphia, Pa., is in the market for 25 mine cars, one and one-half tons capacity, two-foot six-inch gauge, self-oiling, narrow-tread 10-inch wheels, two-inch axles; two mine pumps, five-inch suction, five-inch discharge; two Phillips automatic mine tipples; one five-hole blasting apparatus. Give full and complete description, with lowest cash price.

Office Fixtures.—J. A. Glenn, Gastonia, N. C., wants prices on office fixtures.

Piping.—Chas. C. Wilson, Columbia, S. C., wants prices on sewer pipe 8 to 18 inches in size.

Pulverizer.—Anniston Junk Co., Anniston, Ala., is in the market for a moderate-sized mill suitable for taking in bone in its natural size and crushing and grinding it.

Pump.—Fidelity Manufacturing Co., Charlotte, N. C., wants one 3x5 second-hand steam pump with receiver.

Pumps.—See "Boilers and Boiler Specialties."

Railway Equipment.—Savannah Locomotive Works & Supply Co., John J. McDonough, Jr., secretary-treasurer, Savannah, Ga., is in the market for from five to ten tons of relaying 60-pound steel rails.

Railway Equipment.—Dunglen Coal Co., Thurmond, W. Va., wants a second-hand locomotive, 8 to 10-ton, three-foot six-inch gauge.

Railway Equipment.—Maryland Equipment & Supply Co., 310 St. Paul street, Baltimore, Md., is in the market for 100 tons 30-pound relaying rails with splices for Harrisburg delivery and second-hand 36-inch-gauge gasoline locomotive.

Respirator.—Rose City Cotton Oil Co., Little Rock, Ark., wants addresses of manufacturers of respirators.

Rubber Tubing.—Brake-Givens Improved Tool Handle Co., P. O. Box 569, Paducah, Ky., will be in the market for rubber tubing.

Scales.—Rhode Island Company, Spray, N. C., is in the market for a pair of second-hand barrow scales and a pair of cotton-weighing beam scales.

Sewerage System.—Light, Water and Sewerage Commission, Griffin, Ga., will open bids November 22 for constructing a complete system of sewers, including material for same, and additions to water-works plant. There will be approximately 15 miles of pipe sewers, 8 to 12 inches diameter; 170 manholes and 60 flush tanks; water pipes (number of tons not stated), 6 to 12 inches diameter; 42 hydrants; 50 valves, 6 to 12-inch drain. Proposals will be received on the whole or on any of the subdivisions, as shown by the specifications, and must be made out on blank form furnished by the commissioners and accompanied by certified check for amount equal to 3 per cent. of bid. Plans and specifications will be on file and may be seen after November 10 at office of commissioners, Griffin, Ga.; also at office of Nisbet Wingfield, consulting engineer, Augusta, Ga. Commissioners reserve usual rights.

Skidder.—See "Lumbering Equipment."

Steam Shovel.—Maryland Equipment & Supply Co., 310 St. Paul street, Baltimore, Md., is in the market for a small steam shovel, traction wheels, weight from 12 to 15 tons, for prompt shipment.

Steel Ceiling.—See "Building Equipment and Supplies."

Tanks.—Henry M. Warren Company, 1302 Walnut street, Philadelphia, Pa., wants two cedar tanks, 5000 to 7000 gallons, and desires full and complete description, with lowest cash price.

Vaults.—J. A. Glenn, Gastonia, N. C., wants prices on vaults.

Vehicle Works.—C. W. Young, Ripley, Miss., wants machinery for buggy factory.

Wagon Material.—Benjamin A. Padgett Wagon Works, Laurel, Miss., wants to correspond with manufacturers of and dealers in hubs, spokes and rims for heavy wheels, especially log-wagon wheels and hubs with eight mortises.

Wagon-working Machinery.—Benjamin F. Padgett Wagon Works, Laurel, Miss., is in the market for cold tire setters and tire benders for low wheels.

Water-power Machinery.—Oconee Water, Light & Power Co., Walhalla, S. C., wants machinery for developing 700 horse-power. (See "Electric-light Plant Equipment" and "Water-works Equipment.")

Water-works.—See "Sewerage System."

Water-works.—See "Electric-light Plant."

Water-works Equipment.—Oconee Water, Light & Power Co., Walhalla, S. C., wants one 150,000-gallon standpipe, six miles 6 to 10-inch piping and 25 to 30 hydrants. (See "Electric-light Plant Equipment" and "Water-power Machinery.")

Well-drilling.—W. W. Adams, Ozark, Ark., wants to correspond with parties relative to drilling gas well.

Weighing Machine.—Continental Baking Powder Co., Nashville, Tenn., is in the market for an automatic machine for weighing, packing and labeling baking powder, especially a machine that weighs and packs several packages at a time.

Wire Fencing.—Henry M. Warren Company, 1302 Walnut street, Philadelphia, Pa., wants one carload barbed-wire fencing, and desires full and complete description, with lowest cash price.

Wireworking Machinery.—Gibbs Machinery Co., 804 West Gervais street, Columbia, S. C., is in the market for hand machine for weaving wire fencing, and wants jobbers' prices.

Woodworking Machinery.—See "Furniture-factory Equipment," "Vehicle Works" and "Coffin Factory."

Woodworking Machinery.—The Britton Lumber Co., Lakewood, Fla., is in the market for one combination rift and gang edger.

Woodworking Machinery.—Soper-Hulsark Manufacturing Co., Cookeville, Tenn., will be in the market for a veneering machine.

Woolen-mill Equipment.—See "Hydro-tractor."

MEXICO.

Copper-Silver Mines.—Albino Garcia of Etzatlán, Jalisco, has filed claims to copper-silver veins which he proposes to mine.

Gold-Silver Mines.—William H. McCord of Guanajuato, Guan., has filed claims to silver-gold veins which he proposes to mine.

Gold-Silver Mines.—E. J. Kimball of Silao, Guanajuato, has filed claims to silver-gold mines which he proposes to develop.

Mining Developments.—Edward L. Potts of Ameca, Jalisco, has filed claims to gold, silver and lead properties which he proposes to develop.

Mining Developments.—The Montezuma Mining Co. has been organized, with capital stock of \$1,000,000 (gold), for the purpose of developing gold, silver, copper and lead deposits in the State of Zacatecas. Matthew C. Butler is president; James V. Dignowitty, vice-president; L. T. Michener, third vice-president, and Charles Hedges, secretary, all of Washington, D. C. These parties have also incorporated the Hidalgo Mining Co., with capital stock of \$500,000, to develop gold, silver and copper properties in Parral.

Saw-mills.—W. C. Greene, president of the Greene Consolidated Copper Co., La Cananea, Sonora, and his associates contemplate the erection of saw-mills with an aggregate capacity of 500,000 feet of lumber daily, in connection with the development of new gold and copper lands which they have purchased.

Railways.

Steam Railroad.—President W. C. Greene of the Greene Consolidated Copper Co. of Cananea, Mexico, is reported to have purchased the Rio Grande, Sierra Madre & Pacific Railway, the El Paso Southwestern Terminal & Bridge Co. and the Sierra Madre Construction Co. from Tilghman, Rowland & Co. of New York; also that Colonel Greene will extend the line southerly about 100 miles. He is quoted as confirming this, and as saying that a branch will be built from a point near Guzman to La Cananea. As soon as possible the line will be built from Terrazos to Mulatos. Construction is to begin probably by January 1.

Steam Railroad.—Col. Joseph H. Hampson will, it is reported, build a timber railroad from the Rancho de Guarda in the Federal District to the Canada de Napanepa, in the State of Morelos.

INDUSTRIAL NEWS OF INTEREST

Timber Lands Offered.

Four thousand acres of mineral and timber lands in Calhoun and Cleburne counties, Alabama, are offered for sale by H. L. Stevenson of Jacksonville, Ala. The property is near railway facilities.

Control of Lumber Plant.

The controlling stock in a complete lumber plant, located in Arkansas, is offered for sale. Plant's hardwood capacity is 30,000 feet. For information address K 63, care the Manufacturers' Record.

Interest in Copper Mine.

Investors who may consider propositions to become interested in a partly-developed copper mine in the South are invited to address W. R. Johnston at Richmond, Va. He will give full particulars.

Cotton-oil Mill for Sale.

The ownership or control of an established and profitable cotton-oil mill in Georgia is offered for sale, together with the management of the enterprise. Reasons for selling and full details can be obtained by addressing "Oil Mill," care of the Manufacturers' Record.

The Ruth Knitting Machines.

It will interest users of and those acquainted with the merits of the Ruth automatic knitting machines to know that the manufacture of these successful equipments will be continued. At the recent sale of the Ruth Automatic Knitting Machine Co.'s property at York, Pa., the entire assets were purchased by Edwin T. Moul of York. As soon as the courts confirm the sale Mr. Moul will organize a new company with ample capital, continue the business and extend it.

basis, and the owners will furnish the best of reasons for their desire to dispose of the property. Information regarding this business opportunity can be obtained by addressing "W," care of the Manufacturers' Record.

Hammond Ice-Plant Sale.

Messrs. Edward C. Carrington and Wm. H. Evans, receivers of the Hammond Ice Co. of Baltimore, Md., announce that the plant No. 1 of the company will be offered at public outcry on December 1 to the highest bidder. This is a modern ice-manufacturing establishment, with all facilities for the economical production of marketable ice; also has storage-houses, etc., to facilitate the conduct of business. Messrs. Pattison & Gahan are the auctioneers in charge of the sale.

South Gets a Panama-Canal Contract.

There can be no question but that Southern manufacturers are to play an important part in the construction of the Panama canal. They are receiving some of the best contracts for furnishing the supplies needed. Contract for furnishing gate valves and fire hydrants for the canal has just been awarded to the Herron Pump & Foundry Co. of Chattanooga, Tenn. This company is sending out a leaflet announcing its taking of the contract named, merely stating what the contract is and then adding "We Got It."

Grand Prize for Wire Ropes.

Among the distinct exhibits at the St. Louis Fair was that presented by the Broderick & Bascom Rope Co., manufacturer of wire rope and cordage, plant and office in St. Louis. As an evidence of the high-grade character of the company's products, aside from extensive use throughout the world, is the fact that the grand prize for wire ropes has been awarded

men, 819. She carries the largest electric-light and power plant ever installed on a battleship. The plant, which has a capacity of 800 kilowatts, consists of eight Crocker-Wheeler generators direct connected to Forbes marine-type engines. The Crocker-Wheeler Company, manufacturer and electrical engineer, Ampere, N. J., built the electrical equipment.

Corliss Engines for Cotton Gins.

The Gloster (Miss.) Oil Works' four-stand gin was destroyed by fire on October 21. By October 23 the company had placed contracts with the Murray Company of Dallas, Texas, for eight Murray gins, and with the Southern Engine and Boiler Works of Jackson, Tenn., for a 14x30 Southern Corliss engine. The Gloster boiler plant and oil mill were uninjured by the fire. The company will be ready to gin cotton again within three weeks from the date of the fire. The use of a Corliss engine for the gin, while not the most common practice, is claimed to be the best for gins of that size, and is a point well worth the consideration of other gin-owners.

An \$80,000 Building of Cement Blocks.

The use of hollow cement blocks for erecting all kinds of buildings increases every day. At Huntington, W. Va., there has just been completed an \$80,000 hospital structure erected of hollow cement blocks. This building is three stories high, 104x160 feet, and the selection of hollow cement blocks for a structure of this size and cost is a strong point in favor of these blocks. In this particular building the 18,000 blocks used were 9x12x22 inches in size, made on a hollow cement block machine manufactured under the Normandin patents by the Cement Machinery Co. of Jackson, Mich. The Normandin machine makes any size or style of block desired.

Woodward Governors for Water-Wheels.

Southern water-wheel users appreciate the design, construction and regulation of the Woodward governors for water-wheels, as is evidenced by the following orders recently given: Two for Cape Fear Power Co., Fayetteville, N. C.; two for Towaliga Falls Power Co., Griffin, Ga.; one for Jackson (Ala.) Electric Light Co.; one for Lilly Mill & Power Co., Shelby, N. C.; three for Warner Moore & Co., Richmond, Va.; one for Weaver Power Co., Asheville, N. C.; one for town of Front Royal, Va.; one for Emporia (Va.) Water-Power Co., and one for Cacapon Power Co., Berkeley Springs, W. Va. Woodward governors are manufactured by the Woodward Governor Co. of Rockford, Ill.

Grand Prize to Coe Manufacturing Co.

In the manufacture of high-grade veneer-cutting machinery of every description the Coe Manufacturing Co. of Painesville, Ohio, has long been prominent. The Coe apparatus is designed to do its work in the factory with that degree of satisfaction which always enthralls the factory manager and makes him a steady buyer of Coe machinery. At St. Louis the Coe Manufacturing Co. presented a complete exhibit of its specialties in veneer machinery, and has been gratified to receive, during the past week, the grand prize. This selection of the judges comes only after careful consideration of all the makes of machines shown, and the meritorious features of the Coe equipments are thus recognized to be superior in their special field.

Make a Test of Albany Grease.

Engineers who have not made a practical test of Albany Grease should secure a sample with grease cup, without cost, from Messrs. Adam Cook's Sons, 313 West street, New York city, the only makers, and prove its merit each for himself. E. D. Hering, proprietor Cross Plains (Wis.) Roller Mills, says: "I am in receipt of your Albany Grease Cup and sample of Albany Grease for wrist pin. I have had an oil adjustable cup for a number of years that always gave good satisfaction, but it cost me \$3.50 for the cup and takes one-half pint of oil per 12 hours. Your Albany Grease Cup, holding two ounces, with one filling of Albany Grease lasted six days and works fine. I certainly shall use nothing else but your Albany Grease hereafter."

Norton Emery Wheel Co. Awarded Prize.

Grinding machinery was one class of mechanical equipment at the St. Louis Exposition which attracted especial attention from manufacturers of all kinds who have grinding to do in the course of their operations. Some prominent makers of grinding machinery presented exhibits, among them being the well-known Norton Emery Wheel Co. of Worcester, Mass. This company was awarded

The Rebuilding of Baltimore---How the Daily Bulletin is Covering It.

Complete and Satisfactory.

THE BALTIMORE REFRIGERATING & HEATING CO.,
408 to 426 S. Eutaw St. 409 and 411 W. Conway St.
Baltimore, Md., May 31, 1904.

Manufacturers' Record Publishing Co.:

Gentlemen—All the reports that we have received from you have been complete and satisfactory, and we have no doubt that anyone subscribing to your paper will find it very useful. Yours truly,

L. M. TOUGH,
General Manager.

Foundry Facings for Government.

The S. Obermayer Company, Cincinnati, Ohio, manufacturer of foundry facings and foundry supplies, has secured contract from the United States navy-yards, New York and Cavite, P. I., for foundry facings and foundry supplies to be used during the coming year at both of these navy-yards.

Want to Invest in Lumber Company?

Investors who are likely to be interested in the organization of a company that will operate in California are invited to address Geo. Vinson at Berkeley, La. Mr. Vinson contemplates this organization, and has available a great quantity of redwood, cedar and spruce timber land. About 75 per cent. of the timber is redwood.

Control of Coffin Factory.

One of the largest coffin factories in the country, now transacting a large and profitable business, offers controlling interest for sale. About \$25,000 is required to take advantage of this proposition, and investors will be asked for references. For information address "Casket," care of the Manufacturers' Record.

A Good Business Opportunity.

It has been found necessary, on account of increasing demand, to enlarge the plant of the Palestine Ice & Fuel Co. of Palestine, Texas. The company will expend from \$15,000 to \$30,000 for this purpose, and is desirous of obtaining the additional capital from some investor who will associate himself with the establishment and assist in managing it. Write to the company for particulars.

Foundry and Machine Shop.

A well-equipped foundry and machine shop, established in a Southern city of 25,000 inhabitants, is offered for sale. The plant is at present being conducted on a profitable

the company. This is the highest price awarded for ropes of this character, and the company is justly very much gratified at the result, and is receiving the congratulations of the trades and others who are interested.

Cement for Panama.

The American Cement Co., Pennsylvania Building, 15th and Chestnut streets, Philadelphia, Pa., has been awarded the first contract for the cement for the Panama canal, the amount being 10,000 barrels. The bid was made in the name of the company's New York selling agency, the United Building Material Co., Park Row Building, New York city, and the award was made last Saturday. The American Cement Co. has supplied its old reliable "Giant" Portland Cement for some of the most important engineering works in the world, including 1,500,000 barrels for the New York subway.

Graham Nut Co.'s Facilities.

When you want nuts, machine bolts, blank bolts, carriage bolts, bolt ends, lag screws, wrought washers, cast washers, turnbuckles, rods, etc., write the Graham Nut Co. of 1317 West Carson street, Pittsburg, Pa. This company has been known since 1874 as one of the prominent manufacturers of the products mentioned, and it has recently increased its facilities in order to meet the enlarging demand consequent upon the satisfaction its bolts, etc., have given purchasers. The company has its plant at Neville Island, Pa., and its offices and warehouses have just been removed to the Pittsburg address noted.

Electric Plant for U. S. S. Connecticut

The Connecticut, launched September 29, 1904, at the Brooklyn navy-yard, is the largest battleship afloat; length, 450 feet; beam, 76 feet 8 inches; normal draft, 24 feet 6 inches; normal displacement, 16,000; indicated horsepower, 16,500; speed, 18 knots; officers and

two grand prizes and two gold medals for its product, and was the only company receiving a grand prize for grinding machines. This award of the judges is an honor to the company, and indicates that Norton Emery Wheel Co. products will retain the leading position they have established for emery wheels, tool grinders, oilstones and other machines and articles used in grinding.

Increasing Demand for Coltrin Mixer

Merit in a product soon becomes known and increases the demand, thus keeping the manufacturer busily engaged. One is reminded of this by hearing that the demand is steadily increasing for the R. B. Coltrin Cement Mixer and Molds. Every one of these machines that begins operations acts as a potent agent in making more orders for the company manufacturing it. The brick-manufacturing industry is beginning to appreciate the advantages of the Coltrin Mixer, and is taking many of them. A Wisconsin brick-maker who had an output of 3000 daily ordered a Coltrin Mixer on 10 days' trial; the second day after receiving the machine he made 5000 bricks, without any increase in his working force. The Knickerbocker Company of Jackson, Mich., manufactures the R. B. Coltrin Cement Mixer, and invites applications for a machine on trial.

The Charleston Lead Works.

One of the most important enterprises of its kind in the entire South is the Charleston Lead Works at Charleston, S. C. This company was established in 1890, and has a 60x200-foot building equipped with the best machinery obtainable for the manufacture of all sizes and weights of lead pipe, sheet lead and solder, besides having just bought the Berry patents on lead traps, nipples of every description, bends, ferrules, bottle traps, drum traps, grease traps and other plumbers' specialties in lead. All these Berry goods are offered to buyers and cannot be obtained elsewhere. Excelsior to the extent of 50,000 pounds every day is also made in the company's plant. Dealers in and users of plumbers' goods will therefore, it is evident, find the Charleston Lead Works' products covering a wide range of the supplies they require. Buyers are invited to write for price-lists before making contracts.

Virginia Bridge & Iron Co. Expanding

The great demand for steel bridge and general metal construction work throughout the South has been participated in by the manufacturers of that section, one of the most prominent being the Virginia Bridge & Iron Co. of Roanoke, Va. This company's business has increased so much during the past year that it was necessary to provide greatly increased facilities to take care of it, and this has been done by purchasing the new and modern plant of the Carolina Steel Bridge & Construction Co., located at Burlington, N. C. This acquisition will enable the Virginia Bridge & Iron Co. to produce 20,000 tons of manufactured materials per annum and have ample room at both plants for additions and enlargements as occasion may demand. The Virginia Company takes over the entire business of the Carolina Company as it stands. Orders for bridges and structural steel of other kinds will be filed and attended to promptly. Railroad companies, manufacturing corporations, contractors, builders and others who are in the market for structural steel will find their economies served by applying for estimates from the Virginia Bridge & Iron Co. whenever in the market for construction materials.

The D. Wilcox Vehicle Materials.

Manufacturers of carriages, wagons and other vehicles in every-day use find that in order to keep their products up to date it is necessary to use only the latest and best forms of gear sets, carriage hardware and forgings. They need not go far in seeking these requisites for the modern vehicle, and many thousands of them are already acquainted with the superiority of the vehicle materials manufactured by the D. Wilcox Manufacturing Co. of Mechanicsburg, Pa. This enterprise was established by Darius Wilcox many years ago, and his inventions and devices for the improvement of vehicles have become extensively known. The D. Wilcox Manufacturing Co. is now making some important announcements for the 1905 trade. It emphasizes the merit of its assembled gear sets, with all parts interchangeable and all holes drilled, making it easy to adopt a system in any factory to greatly increase, even double the capacity. The sets are furnished with a mechanically-made three-prong king bolt. Not a part turns on a nut, and the sets are warranted guaranteed not to rattle. Single perch gear sets, three-reach gear sets, fifth wheels, bottoms, perch irons, hinges, block plates, bolts, nuts, etc., in fact, every part needed for various kinds of vehicles, are included in the D. Wilcox products. In cata-

logue No. 7 the company has listed all its products and presented full details as to sizes, weights, prices and other data of interest to the vehicle manufacturer.

For Ginning, Handling and Packing Cotton—The Lummus Perfected Mechanical Equipments.

The cultivation and marketing of cotton has attracted the energies of some of the most ingenious mechanical inventors of the age. The consequence of this has been the perfection of machinery for ginning, handling and packing cotton, and the production of these equipments has become an important branch of manufacturing. In the South itself there were early efforts made to supply the equipments, and for years the F. H. Lummus Sons Company of Columbus, Ga., has been engaged successfully in meeting the demand. Lummus machinery for ginning, handling and packing cotton is used largely throughout the entire South. Its effectiveness for the specified purpose for which each machine was designed, its economy in operation and other features appealing to the discerning buyer have been thoroughly proven. The standard gin with double brush belt, single-drive gin and short-distributor feeder, special gin, direct-drive hulling gin, pneumatic elevating and distributing system, pneumatic cotton elevator, cotton-elevator fans, lint-due system, battery condenser, cotton presses, revolving double-box cotton press, self-tramping screw press, etc., are well-known apparatus to cotton-growers. The F. H. Lummus Sons Company finds occasion steadily for increasing its facilities, and is now erecting another building three stories high, 75x155 feet, to add to the facilities of its present large pattern shops, metal shop, paint shop, press building, etc. Its export business is also rapidly growing—an evidence that it is not only in the cotton fields that Lummus machinery finds its mission.

Ball-Engine Orders.

The Ball Engine Co., maker of automatic cut-off engines, Erie, Pa., has made the following shipments recently: Lorain (Ohio) Steel Co., Lorain, Ohio, one 160-horse-power direct-connected engine; Richmond (Va.), Fredericksburg & Potomac Railroad Co., one 200-horse-power engine, direct connected; Flannery Bolt Co., Bridgeville, Pa., one 100-horse-power engine; Michigan Sanitarium and Benevolent Association, Battle Creek, one 200-horse-power engine, direct connected; New York & Pennsylvania Co., Johnsonburg, Pa., three 135-horse-power engines and one 175-horse-power engine; Pittsburg (Pa.) Brewing Co., one 135-horse-power engine; Seelbach Hotel Co., Louisville, Ky., three 25-horse-power tandem compound engines, direct connected; Hotel Nelson, Rockford, Ill., one 175-horse-power engine, direct connected; United Gas & Electric Co., New Albany, Ind., one 80-horse-power vertical engine, direct connected; Harry V. Oliver Power Plant, Pittsburg, one 700-horse-power vertical cross compound Corliss engine, direct connected to alternator; Clarksburg (W. Va.) Electric Co., one 600-horse-power Corliss, direct connected to alternator; Eastman Kodak Co., Rochester, two 400-horse-power vertical cross-compound engines, direct connected; J. M. Deerholm Bros. & Co., Ltd., Pittsburg, one 135-horse-power direct-connected engine; State Penitentiary, Richmond, two 80-horse-power engines, direct connected; Hotel Traymore, Atlantic City, one 75-horse-power engine, direct connected; Detroit (Mich.) Trust Co., one 400-horse-power engine; C. A. Burton Machine Co., Kansas City, one 160-horse-power engine, direct connected; Dravo, Doyle & Co., Cleveland, Ohio, two 60-horse-power direct-connected engines, and City Lighting Plant, Wilton Junction, Iowa, one 125-horse-power engine.

TRADE LITERATURE.

The First 1905 Souvenir.

Have you seen it? A delicately-tinted half-tone of a fascinating young girl against a dark background, conspicuously mounted on an extra heavy white card. This, in the form of a panel, with the fly leaves of a calendar near the lower edge, is the 1905 greeting that the Burt Manufacturing Co., Akron, Ohio, is sending out to its representatives in nearly every country on the globe.

Obermayer Bulletin for November.

Those who look for the coming of the Obermayer Bulletin each month will find the November issue replete with timely facts. This number contains foundry information for molders in the way of trade reports, molding and casting a sheave wheel with green-sand groove, suggestions for the cupola tender, a few hints to foremen, the model foundry at the St. Louis Exposition, the results in the

Obermayer advertising contest, etc. The S. Obermayer Company issues the Bulletin from its Pittsburg office.

Garvin Milling Machines.

Garvin milling machines, a leading specialty for 40 years, are made in five sizes of universals and seven sizes of plain. They have been used by thousands of operators, always affording that general satisfaction which brings repeat orders to the manufacturer. The Garvin machines are the subject of a special booklet issued by the Garvin Machine Co. of New York, Philadelphia and Syracuse, with agencies in all the leading cities of this country and other countries. Buyers of this class of equipment will find their information about milling machines largely added to by reading the Garvin booklet. Write for one.

Driving the New York Subway.

Many interesting facts have appeared regarding that great engineering work, the New York subway. An illustrated booklet entitled "Driving the New York Subway" has just been issued. It presents information regarding the compressed-air machinery that was used. Of the 26 air compressors used by the various contractors, 16 were built by the Ingersoll-Sergeant Drill Co. of New York city. These machines furnished compressed air for rock drills, pumps, hoists and pneumatic tools. There were also 194 drills used. Tabulated lists of these various machines make an impressive array and speak volumes for the merit of the machinery. They show how large a part Ingersoll-Sergeant machinery had in driving the subway.

For Undercutting Coal.

By the successful application of the continuous cutting principle to room and entry work the Sullivan Chain Mining Machine has made a great advance in the mechanical undercutting of coal. The machine advances the cutter-bar beneath the coal at the right rib of the room, and then travels sideways, cutting as it goes to the left rib, thus completing the mining at one operation. The merit of this is apparent to experienced coal operators. Facts about the Sullivan machine are presented in Bulletin 48B issued by the Sullivan Machinery Co., builder of the machine, Chicago, Ill. The bulletin named is one of a series which will be issued describing new machines and new features of old machines. Send your name and address for the mailing list.

The Holley Automatic Carburetor.

Users of gas engines, whether automobile, marine or stationary, will be interested in a description and illustration of the Holley Automatic Carburetor now being issued in leaflet form. This carburetor is designed for a uniform mixture, regardless of motor speed, and where close adjustment is desired in gas engines will be found to satisfy all requirements. It insures the gas which is formed in the carburetor being as highly explosive as possible by making it a certainty that the petrol spirit and air bear to each other a definite proportion. The Holley machine has been subjected to the most exhaustive tests on various engines and can be adapted to all the different types. It is made in three sizes at a selling price that is attractive. George M. Holley of Bradford, Pa., manufactures the device. He will send an illustrated leaflet to those who will request it.

The Power of the New York Subway.

Everyone recognizes that the New York subway is one of the greatest engineering accomplishments of our time. Many interesting facts concerning it are appearing in the press, the subway having so recently opened to traffic. The power of the subway is an especially interesting subject. The powerhouse cost \$7,000,000, is 706 feet long, 201 feet wide, capacity 132,000 horse-power; coal bunkers hold 25,000 tons of coal; five stacks 265 feet high each, 15 feet diameter at top, weight 1200 tons each, built of brick with steel-column bases. Nine Allis-Chalmers engines used are of the largest size ever built, and combined form the most powerful steam plant in the world. The capacity of each is 12,000 horse-power, nominal rating 8000 horse-power. The various details as to weight and dimension and other facts are presented in "The Power of the Subway," issued by the Allis-Chalmers Company of Chicago, which built the engines. There is also considerable general information as to the subway and its operation.

Badger's Fire Extinguisher.

"An Ounce of Prevention" is the title of a booklet which tells briefly how many incipient fires can be extinguished and thus prevent serious conflagrations. It is well known that frequently small blazes are discovered that could readily be quenched if the proper

facilities were at hand, but these being lacking, a damaging fire results. The ounce of prevention is the fire extinguisher—the handy metal tube containing chemicals to be played on the fire and ready for instant use by any person. The Badger Fire Extinguisher is one of the most successful devices of that character. It feeds sulphuric acid automatically, so that it mixes with the soda solution, instantly forming carbonic acid gas at a pressure of about 90 pounds to the inch. This pressure is the force that drives the water straight at the fire and puts it out. The gas itself will put out a fire independently of the water. For booklet referred to above write the Badger Fire Extinguisher Co., manufacturer of the Badger Fire Extinguisher; offices at 32 Portland street, Boston, Mass.

The Protection of Steel.

The presence of sulphurous gases, cinders and steam, combined with exposure to the elements, provide conditions most favorable to the rapid corrosion of steel work. Steel bridges and viaducts over railroad tracks are subjected to all of these in the greatest degree, none more so than the Willis-avenue bridge over the New York, New Haven & Hartford Railroad freight yards and the Harlem river, New York city. Adequate protection can be provided by paint. In April, 1904, an examination of the 15-foot girders of the Willis-avenue bridge plainly showed the absolutely perfect condition of Dixon's Silica-Graphite Paint after four years' exposure. Careful inspection further showed the unbroken condition of Dixon's Black on the rivet-heads, angles, flanges and webs of all the girders, clear evidence that this coating resists the conditions which cause corrosion. Time tests the efficiency of a paint. Dixon's Silica-Graphite Paint has been on the market 40 years. Records of its durability in all climates can be furnished by the Joseph Dixon Crucible Co., Jersey City, N. J. Send for illustrated leaflet.

The Buffalo Scale Co.'s Scales.

A scale is one of the most important things purchased by those who have occasion to do any weighing. It will not be satisfactory unless accurate, and a scale which is not strong and durable will soon become inaccurate. Accuracy, strength and durability are the principal features of the scales made by the Buffalo Scale Co. of Buffalo, N. Y. They are extremely simple in construction, and have few parts. They have been used and are being used by thousands of exacting firms and companies, and a steady number of repeat orders to the factory indicates the satisfaction afforded patrons. The company manufactures some 600 sizes and styles of weighing machines, with capacities from 1-120 of an ounce to 150 tons, besides many special scales ordered by purchasers during the year. The complete Buffalo line comprises about 1000 styles, and specifications and agents are selling them in every State and Territory and in all the principal countries of the civilized world. An illustrated catalogue now being distributed to applicants will give anyone in need of scales some valuable pointers on where to obtain the best possible weighing equipment. Send for one.

The F. E. Myers & Bro. Catalogue.

Water, hay and fruit and the producing of same interest millions of people. The farming classes, especially, who have to do with the immediate production, require improved mechanical equipment and devices for facilitating their work in producing those important articles of consumption—hay and fruit—and the obtaining and distribution of the water used. Such things as well pumps, house pumps, power pumps, spray pumps, hay carriers, steel tracks, hay forks, pulleys, hooks, door hangers, etc., are among the devices facilitating hay and fruit production. It is well known that Messrs. F. E. Myers & Bro. of Ashland, Ohio, have a world-wide reputation as designers and manufacturers of pumps and hay tools, as well as a multitude of other specialties handled by the hardware trade. The Myers Catalogue No. 40 has been issued, and displaces all previous issues. It comprises nearly 400 pages, all fully illustrated, thus furnishing the dealer with data which he requires for his guidance in selling. This data enables the dealer and his salesman to thoroughly understand the construction and adaptation of the Myers inventions, so that the customer—the farmer—may be fully informed by the man from whom he buys. About 15,000 Myers dealers are receiving this catalogue.

The Benedict Fuel-Oil Burner.

The economy of oil as fuel has become an established fact by the experience of many who have adopted it. A system of burning oil now being introduced is said to possess the distinctive features in the working of iron, steel, copper, aluminum, bronze, etc., as effecting a saving of at least 50 per cent. in

operating expenses, besides doing away with the handling of coal and ashes, storage space for coal or coke, and the uneven heat produced by loading a furnace with fresh fuel. This system is the Benedict Fuel-Oil Burner, which has proven economical and serviceable, and is in some quarters displacing high-priced burners. It is simple in construction and operation and is not exposed to the heat of the furnace to which it is attached. It has three adjustments: By the globe valve, regulating the flow of oil; by the blast gate in the blast pipe, and by moving the center of the burner to and from the vortex, which increases or diminishes the blast as desired. The Benedict Manufacturing Co. of Salamanca, N. Y., manufactures this burner, and is prepared to correspond with prospective purchasers of such apparatus. Literature descriptive of the Benedict equipment will be sent to applicants. Responsible representatives are wanted in the South and Southwest.

Storage Airbrake System.

High speed and high tension characterize the civilization of today. The fundamental idea is to "get there." The times move on, and men move with them. New conditions bring new problems. City transportation systems are the response to the inexorable command, "Move on." Rapid transit grows more rapid year by year. First the street coach, then the horse car, next the cable car, then the one-motor electric. Yet still the cry is "Faster! Faster!" So the high-power quick-service city railway of today was evolved—and the end is not yet. As speeds increase the problem of safety becomes more complex, for still the public must be safeguarded. The problems of transit safety are the problems of car-braking. There has been issued a little pamphlet which tells briefly how one of the great city railway systems, the St. Louis Transit Co., solved the problem of braking the heavy cars of its quick-service city system—the system which is so successfully handling the vast crowds of the World's Fair. The booklet will interest every engineer and manager of street-railway interests, and has been sent to the members and guests of the American Street Railway Association with the cordial greetings of the Ingersoll-Sergeant Drill Co. and the Westinghouse Traction Brake Co. of New York.

Steam-Plant Economy—Moffatt Devices for Effecting It.

It may be presumed that no engineer questions the great economy gained in cost of steam power by utilizing the waste heat in the exhaust steam through the use of feed-water heaters. The best results are obtained when the feed water is fed constantly just as the boilers need it. It is then a question as to which equipment shall be chosen for this purpose. The Park Manufacturing Co. of Charlotte, N. C., presents the answer in its catalogue of the Moffatt boiler pumps and feed-water heaters. The Park catalogue gives full details as to the design, construction and operation of the Moffatt devices, and points out how they are effecting economies wherever used. These machines are not experiments. They have been fully tested, and are in extensive use today in many establishments which have selected them after considerable investigation for the ideal apparatus for their power plants. No steam-plant owner can afford to be without the information which the Park Manufacturing Co. presents in its booklet, and inquiries for copies will receive prompt attention. The Park Manufacturing Co. is the manufacturer of the Moffatt feed water heaters, variable stroke power boiler-feed pumps and deep-well pumps, all of these types having found great favor through the country. It will be found that the prices on these equipments are lower than would be presumed from the extent of the economies they accomplish.

Rhode Island Industries.

The industrial progress of Rhode Island has been marvelous, and the State's manufactured goods have a larger value per capita than any other in the Union. In Providence one-fifth of the jewelry product of the United States is made. Rhode Island has ranked second in number of spindles for the cotton industry ever since the inception of the industry. Its annual production of worsted goods amounts to \$34,000,000, its cotton goods to \$27,000,000, other textile products (woolen, knit, etc.) amount to \$19,000,000. In the production of engines and boilers the State has a world-wide reputation. Fine tools, screws, files, rubber goods, etc., also play an important part in its manufacturing advance. There are some 4600 active manufacturing plants in Rhode Island, their annual output being valued at about \$185,000,000, and the percentage in increase in factories for 10 years has been double that of the increase in population. The Rhode Island Industries Catalogue has been issued to present a few

facts regarding the industries to the public. It is a handsome book, illustrated from photographs of views of Providence and other cities, and of many of the most important manufacturing establishments, including that of the American & British Manufacturing Co. of Providence, R. I., manufacturer of the Diesel engine, Geo. H. Corliss engines, Greene-Wheelock engines, guns, projectiles, fuses, drop and hydraulic forgings, etc. This company is sending, with its compliments, a copy of the book to its friends.

Weber Steel-Concrete Chimneys.

A chimney should be an airtight structure containing a smooth vertical passage to take away the smoke and gases from a furnace or to produce a draft and thus facilitate combustion. The first class of chimney requires size, the second requires height. Engineers have given considerable thought to the method of construction and the materials to be used for a chimney in order that the completed structure may meet all the requirements of its owner. The Weber Steel-Concrete Chimney does this. It is built, as its name indicates, of reinforced concrete with steel, and its designers and builders have perfected methods that apply to their specialty, so that the Weber chimney as completed affords the highest possible degree of satisfaction to the most exacting operator who needs such a structure in his daily work. The Weber Steel-Concrete Chimney Co., offices in the Ashland Block, Chicago, Ill., builds the Weber Chimney, doing no other construction work, and is therefore prepared to take contracts with the ripe knowledge of an experienced and successful specialist. It has issued an illustrated booklet which tells all about steel-concrete construction and how this method of building has been perfected and applied by the Weber system to chimneys, besides presenting views of some big chimneys erected in various States and of the different stages of progress in such construction work. Industrial plants, cities and others whose wants may include a chimney should not fail to investigate the Weber Company's methods.

Producer Gas—Its Uses and Cost.

Producer gas is referred to as the cheapest form of energy from fuel, and is made in gas producers. It is used as a motive power for driving gas engines and as fuel for various heating and furnace work. "Producer Gas—Its Uses and Cost," is the title of an illustrated pamphlet referring to the subject of producer gas. It is really the first section of catalogue "A" of the Wile Power Gas Co. of Rochester, N. Y., manufacturer of gas producers for power and fuel. The pamphlet enables one to compare producer gas with other forms of power, and shows particularly the great economy of producer-gas power over modern steam plants. It also shows the advantages and efficiency of producer gas as a fuel compared with coal fires, illuminating gas and natural gas. Automatic gas producers fitted with the Wile patent regulator are fully described in section 2 of catalogue A. Every one of the Wile automatic producers has met with great success wherever used, because its regulator controls it, so that uniform quality of gas is made with variable load. Section 3 describes suction gas producers, which have been designed by experienced gas engineers and embody the best features of European practice adapted to American conditions. Section 4 describes improved water-bottom producers, which are built especially for bituminous coal and for furnace work. Any user of power who is interested in cheap power or fuel can obtain important information regarding the furtherance of economy in his establishment by writing to the Wile Power Gas Co.

The Phoenix Engine.

Prominent in that particular class of engines which has so largely contributed to the successful development of electrical power transmission is the Phoenix Engine. Its builders have been designing and erecting engines for 30 years, and for 16 years confined their efforts to this particular class. Their improvements have resulted in an engine of the highest grade, designed to meet the most severe requirements as to durability, economy and regulation. The engine is built to withstand the most exacting service, is self-contained in construction, and of the enclosed self-oiling type. Such is the Phoenix Engine, built by the Phoenix Iron Works Co. of Meadville, Pa., and now used throughout the country by some of the most exacting engineers. The company believes it has demonstrated on varying loads the superiority of the Phoenix Engine over any of the four-valve type. It occupies but little space, is moderate in first cost, and may be belted to dynamos without any intervening countershafting, or may be coupled direct to the armature shaft. The Phoenix Iron Works Co. states that many men fail to ap-

preciate the effect of cylinder condensations and the varying conditions of compression on an engine working on the class of load incident to electrical power transmission, or the advantages accruing through the use of a shorter-stroke engine, with the more frequent admission of steam, closer degree of regulation and extremely low friction. It claims its type of engine has no equal for driving alternating-current generators running in parallel. The Phoenix catalogue gives a full description of the engine, including some most attractive illustrations of the machine and of the details of construction, such as the main bearing, valves, crosshead, crankshaft, governor valve, etc.

The Possibilities of the South.

[Boston Journal of Commerce.]

One of our enterprising contemporaries, the Manufacturers' Record, in indicating the many natural advantages the South enjoys in comparison with those of New England, draws attention, by way of contrast, to the more robust industrial life, wealth and prosperity of the New England and Middle States, instancing the fact that New England purchases her coal in Virginia, West Virginia and Maryland, her iron in Alabama, Virginia and Pennsylvania, much of her timber in the far South, by far the greater part of her cotton in the Southern belt, and her food-stuff in the West, and yet the contrast is striking between the two sections of the country with regard to industrial activity and everything that represents the phenomenal progress and ascendancy of the nation.

Although New England has only an area of 62,000 square miles and a population of 5,500,000 (as contrasted with the Southern States, which have an area of 827,000 square miles and a population of 23,000,000), yet on her "barren rock-bound soil" she has created "industrial interests producing nearly \$2,000,000,000 a year, against \$1,400,000,000 a year for the entire South. Massachusetts alone, with an area of only 8000 square miles, or nearly one-fourth of the size of South Carolina, one of the smallest Southern States, has an industrial development which until a few years ago equaled that of the entire South, and even today, with all the advance which the South has made in cotton-mill interests, Massachusetts still has more cotton spindles than the 14 Southern States."

As a matter of fact, however, the comparative backwardness of Southern industries was induced and primarily entailed by past conditions for which the South was not entirely responsible, and which no longer existing, leave her free to develop her illimitable possibilities—possibilities for manufacturing such as have been vouchsafed by nature to no other country on earth. The South possesses in overflowing abundance, and far in excess of any other country in the world, inexhaustible supplies of such raw material as coal, iron, cotton, timber and oil, a fertile soil suitable for the production of every variety of agricultural produce, an equable climate and uniform rainfall, and with the example of New England before her, her opportunities and possibilities are, indeed, illimitable and inexhaustible. May she flourish!

In order to show that the field for Southern development is broader and more inviting than that of any other country upon earth, and to give the Southern States themselves a newer conception of their own immense possibilities, we are glad to find that the Manufacturers' Record contemplates the issue of a series of letters dealing with the material upbuilding of New England, the general aim of which will be to cover broadly the material advancement of New England as an inspiration to the South. These letters cannot be of but peculiar interest to all those whom they concern, and we shall look forward to their perusal with much interest.

FINANCIAL NEWS

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., November 9.

After a rather quiet week the Baltimore stock market, following election day, developed remarkable activity, and in some securities—particularly Alabama Consolidated Coal & Iron and also Cotton Ducks—a rapid rise in prices, the income bonds of the Mount Vernon-Woodberry Company selling up to 26 and the 5 per cent. bonds to 72. The Coal & Iron common went to 27, the preferred to 75½. There was also lively trading in Seaboard, and the close of the week saw the advances well maintained.

In the dealings United Railways common sold at 7½ and 7, the preferred at 21½, the income bonds at 44½ and the 4 per cents. at 91¾ to 91½; United Light & Power preferred changed hands at 36¾ and 37 and the 4½s at 92½; Consolidated Gas at 82½ and 83, the 5 per cent. bonds at 116½ and the 6s at 111½; Seaboard common was dealt in at 16½ to 17½ and the preferred from 33½ to 34½, the 4 per cent. bonds at 82 to 84½, the 10-year 5s at 101¾ to 102½ and the 3-year 5s at 98¼ to 98½; Cotton Duck common at 5 to 5½, the incomes at 18½ to 26 and the 5s at 68¼ to 72; G.-B.-S. common at 7 to 6½, the incomes at 24¼, the income scrip at 28¼ to 28, the 1sts at 54¾ to 54¼ and the scrip at 60.

Bank stocks sold as follows: Marine, 37; Farmers and Merchants', 57; Mechanics', 28; Bank of Baltimore, 120; Citizens', 28. Trust and other company stocks were traded in as follows: Continental, 140 to 150; Union, 42½ to 47; Maryland Casualty, 53 to 55½; International Trust, 118½ to 127½; Colonial Trust, 29 to 30; Baltimore Trust, 300; Mercantile, 155; Fidelity & Deposit, 147 to 149.

Other securities dealt in were as follows: Atlantic Coast Line common, 140 to 141; do. Consolidated 4s, 98¼ to 98½; do. new 4s. certificates, 90; Northern Central stock, 90¾ to 100, reacting to 103¾, with recovery to 106; Georgia Southern & Florida common, 30½; Virginia Midland 4th, 112½; Anacostia & Potomac 5s, 103¾ to 104¼; Lexington Street Railway 5s, 103½; Maryland Telephone 5s, 91; Alabama Consolidated Coal & Iron common, 18½ to 27; do. preferred, 65 to 75½; do. 5s, 77 to 81½; Canton Company, 90; Baltimore City 3½s, 1930, 112¼ to 112; do. 5s, 1916, 119½; Lynchburg (Va.) 5s, 107; Georgia & Alabama Consolidated 5s, 109¾ to 110¾; Macon Railway & Light 5s, 91¾; Norfolk Railway & Light 5s, 89 to 90; Florida Southern 4s, 95½ to 95¾; Western Maryland new 4s, 87¾; City & Suburban (D. C.) 5s, 105; Georgia Southern & Florida 1st preferred, 100; German Fire Insurance, 14½; West Hampden Park 5s, 90; Virginia Railway & Electric Development 5s, 96¼ to 97; Baltimore Brick stock, 9; Georgia, Carolina & Northern 5s, 111¼ to 110; City & Suburban (Baltimore) 5s, 114¾; Maryland & Pennsylvania stock, 20; National Enameling preferred, 80; Weatherford, Mineral Wells & Northwestern 5s, 107¼; Charleston & Western Carolina 5s, 112; Atlantic Coast Line (Conn.), 298½; Atlanta & Charlotte 1sts, 107½; Virginia new 3s, 96¾; Virginia Century, 97¼; Georgia Southern & Florida 5s, 114¾; Charleston Consolidated Electric 5s, 88; Baltimore Brick preferred, 31.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
November 9, 1904.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	140 1/4	142
Atlantic Coast Line of Conn.....	100	297 1/2	300
Georgia Southern & Fla. 1st Pref.....	100	31	40
Georgia Sou. & Fla. 2d Pref.....	100	30 1/4	100
Maryland & Pennsylvania.....	100	15	21
Norfolk Railway & Light.....	25	10	11
Seaboard Railway Common.....	100	16 1/2	17
Seaboard Railway Preferred.....	100	34	34 1/4
United Railways & Elec. Co.....	50	7 1/2	8

Bank Stocks.

Citizens' National Bank.....	10	28	29
Commercial & Far. Nat. Bank.....	100	101	102
Drovers & Mech. Nat. Bank.....	100	350	...
Farmers & Mer. Nat. Bank.....	40	57	...
First National Bank.....	100	140	155
Maryland National Bank.....	20	14	...
Merchants' National Bank.....	100	170	175
National Bank of Baltimore.....	100	120	...
National Bank of Commerce.....	100	120	...
National Exchange Bank.....	100	120	...
National Howard Bank.....	10	11	...
National Marine Bank.....	20	36 1/2	...
National Mechanics' Bank.....	10	29	...
National Union Bank of Md.....	100	117	120
Second National Bank.....	100	182	...
Western National Bank.....	20	41	...

Trust, Fidelity and Casualty Stocks.

Baltimore Trust & Guarantee.....	100	290	300
Colonial Trust.....	50	27 1/2	30
Continental Trust.....	100	150	...
Fidelity & Deposit.....	50	147 1/2	150
International Trust.....	100	127	...
Maryland Casualty.....	25	55	55 1/2
Mercantile Trust & Deposit.....	50	155	160
Union Trust.....	50	46	...
U. S. Fidelity & Guaranty.....	100	108 1/2	...

Miscellaneous Stocks.

Alabama Coal & Iron.....	100	25 1/2	27 1/2
Ala. Coal & Iron Pref.....	100	26	27
Consolidated Gas.....	100	83	85 1/2
Consolidation Coal.....	100	96	...
Cotton Duck Votng Trust.....	100	5 1/4	5 1/2
G. B. & S. Brewing Co.....	100	6 1/2	7
George's Creek Coal.....	100	71	72
Mer. & Miners' Trans. Co.....	100	172 1/2	178
United Elec. L. & P. Pref.....	50	36 1/2	37

Railroad Bonds.

Albany & Northern 5s, 1906.....	94	...	...
Atlanta & Charlotte 1st 7s, 1907.....	110	...	...
Atlan. Coast Line 1st Con. 4s, 1902.....	98 1/2	98 1/2	98 1/2
Atlantic Coast Line 4s, Cfs., 1902.....	89 1/2	...	...
Atlantic Coast Line (Conn.) 5s.....	96	...	...
Atlantic Coast Line (Conn.) 4s.....	96	...	...
Atlan. Coast Line (S. C.) 4s, 1918.....	102	103 1/2	...
Carolina Central 4s, 1919.....	97	...	...
Coal & Iron Railway 5s, 1920.....	106 1/2	...	...
Florida Southern 4s, 1919.....	96	96 1/2	...
Georgia & Alabama 5s, 1915.....	110	110 1/2	...
Georgia & Ala. Terminal 5s, 1918.....	111 1/2	...	...
Georgia, Car. & North 1st 5s, 1929.....	111	112	...
Georgia Pacific 1st 6s, 1922.....	124	125 1/2	...
Georgia South. & Fla. 1st 5s, 1911.....	114 1/2	115 1/2	...
Maryland & Pennsylvania 4s, 1901.....	92	92 1/2	...
Raleigh & Augusta 1st 6s, 1926.....	122 1/2	125	...
Savannah, Fla. & West 5s, 1931.....	114	...	...
Seaboard Air Line 4s, 1950.....	84 1/2	84 1/2	...
Seaboard Air Line 5s, 10-year, 1911.....	102 1/2	102 1/2	...
Seaboard Air Line 5s, 3-year.....	98	98 1/2	...
Southern Railway Con. 5s, 1904.....	117	...	...
Virginia Midland 1st 6s, 1906.....	114 1/2	115 1/2	...
Virginia Midland 1st 3-4-5s, 1921.....	112	113	...
Virginia Midland 5th 5s, 1926.....	112	...	...
Western Maryland new 4s, 1952.....	87	88 1/2	...

Street Railway Bonds.

Anacostia & Potomac 5s, 1915.....	104 1/2	104 1/2	...
Augusta Rwy. & Elec. 5s, 1940.....	103	...	...
Baltimore Traction 1st 5s, 1929.....	112	...	...
Baltimore Traction Conv. 5s, 1906.....	100	...	...
Charleston Con. Electric 5s, 1909.....	88	90	...
City & Suburban 5s (Balto.), 1922.....	114 1/2	...	...
City & Suburban 5s (Wash.), 1918.....	105	106	...
Knoxville Traction 1st 5s, 1928.....	103 1/2	105	...
Lexington Railway 1st 5s, 1919.....	102 1/2	103 1/2	...
Macon Rwy. & Lt. 1st Con. 5s, 1903.....	91 1/2	95	...
Norfolk Railway & Light 5s.....	89	90	...
Norfolk Street Railway 5s, 1914.....	107	109	...
North Baltimore 5s, 1912.....	104	125	...
Richmond Traction 5s.....	104	...	...
United Railways 1st 4s, 1919.....	91 1/2	91 1/2	...
United Railways Inc. 4s, 1919.....	44 1/2	44 1/2	...

Miscellaneous Bonds.

Alabama Consol. Coal & Iron 5s.....	81 1/2	82	...
Consolidated Gas 6s, 1910.....	110 1/2	111 1/2	...
Consolidated Gas 5s, 1939.....	115 1/2	116 1/2	...
G. B. & S. Brewing 1st 3-4s.....	54 1/2	54 1/2	...
G. B. & S. Brewing 2d Incomes.....	23	25	...
Maryland Steel 5s.....	102	...	...
Maryland Telephone 5s.....	90	91	...
Mt. V. & Woodby's Cot. Duck 5s.....	71 1/2	72 1/2	...
Mt. V. & Woodby's Cot. Duck Int.....	25 1/2	26	...
United Elec. Light & Power 4 1/2s.....	92 1/2	...	...

The City Loan & Trust Co. of Gainesville, Texas, has filed an amendment to its charter to increase its capital from \$25,000 to \$35,000.

Railroad Reports.

The Louisiana & Arkansas Railway Co. reports through Fisk & Robinson, New York and Boston, for September: Gross earnings 1904 \$69,707, 1903 \$51,802; operating expenses and taxes 1904 \$40,567, 1903 \$43,108; net earnings 1904 \$29,140, 1903 \$8784. For three months: Gross earnings 1904 \$195,708, 1903 \$160,761; operating expenses and taxes 1904 \$120,796, 1903 \$122,285; net earnings 1904 \$74,912, 1903 \$38,476.

The same firm furnishes figures for the Gulf & Ship Island Railroad as follows: For September, gross earnings 1904 \$157,322, 1903 \$161,589; operating expenses and taxes 1904 \$120,426, 1903 \$94,696; net earnings 1904 \$36,896, 1903 \$66,893.

For three months: Gross earnings 1904 \$458,183, 1903 \$467,174; operating expenses and taxes 1904 \$334,337, 1903 \$283,060; net earnings 1904 \$113,846, 1903 \$184,114.

New Corporations.

Arrangements are being made to organize a State bank at Sulligent, Ala., with \$15,000 capital.

It is reported that the Bank of Tonkawa, O. T., capital \$25,000, has been converted into a national bank.

The Bank of Hughesville, Mo., capital \$10,000, has been chartered by W. M. Alsbaugh, Sam Yankee, W. V. McClure and others.

Another savings bank, with capital of not less than \$100,000, is to be opened at Louisville, Ky., about January 1. Mr. Brent Altsheier is one of the promoters.

The Bolivar County Bank, capital \$30,000, has been incorporated at Cleveland, Bolivar county, Mississippi, by S. D. Neal, R. M. Williamson, W. H. Davis and others.

The new banking institution organized at Hagerstown, Md., will be known as the City Savings Bank. Abraham E. Albert is president, and Mayor A. C. Strite is one of the projectors.

The Bank of Manitou, O. T., has been granted permission to begin business with \$10,000 capital. Otto J. Helwig is cashier, and S. D. Bailey, president, and there are 42 stockholders.

The First National Bank of Katy, Texas, capital \$25,000, has been approved. The organizers are F. A. Tucker, H. C. Glenn, W. I. Williamson, H. F. Williamson and C. J. McCarty.

The American National Bank of Ponca, O. T., capital \$50,000, has been approved. The organizers are L. C. Parmenter, John H. Keller, W. A. Robertson, C. F. Babcock and Peter Babcock.

The Southern Trust Co. has been incorporated at Houston, Texas, with \$100,000 capital. The incorporators are C. C. Todd, C. O. Harper, M. M. Johnson, E. A. Jackson and Charles O. Guynes.

The First National Bank of Piedmont, Ala., has been authorized to begin business with \$25,000 capital. The officers are J. W. Hawke, president; M. B. Wellborn, vice-president; O. W. Sharpe, cashier.

The Farmers' Warehouse & Loan Co. has been incorporated at Bonham, Texas, with \$25,000 capital. The incorporators are Fred Fleming, D. A. Templeton, Hudson P. Ellis, Albert H. Saffold and J. S. Patrick.

The First National Bank of Union Springs, Ala., has been authorized to begin business with \$50,000 capital. The officers are Thomas Edwards, president; C. H. Haynes, vice-president, and Hugh Foster, cashier.

The Merkel National Bank, capital \$25,000, has been authorized to begin business at Merkel, Texas, with the following officers: Joseph H. Warnick, president; J. O. Hamilton, vice-president; William H. Dunning, cashier.

The Citizens' Bank of Mountain Park, O. T., capital \$10,000, has been granted a charter. The incorporators are B. P. Wooten of Hazard, Ky.; R. H. Jones of Granite, C. E. Jecks, R. K. Kelly and L. A. Schooler of Mountain Park, O. T.

The Bank of St. George, S. C., capital \$25,000, has been granted a charter. The incorporators are J. S. Wimberley, J. A. Heis, L. A. Klauber, W. S. Mims, L. M. Badham, J. B. Johnston, I. J. and I. S. Hutto, W. B. Raynor and W. C. Pearcey.

The National Bank of Jamesport, Mo., capital \$30,000, has been authorized to begin business. The officers are Thomas K. Hays, president; W. N. Keener and J. H. Klepper, vice-presidents; W. J. Klepper, cashier, and S. L. Reece, assistant cashier.

The Farmers and Merchants' Bank, capital \$75,000, has been organized at Cape Girardeau, Mo. The directors are Henry Nussbaum, Jr., Charles Moeder, Henry Haunschild, Jacob Kellar, Robert Vogelsang, Joseph Hass and Joseph Fuerth.

The Western National Bank of Louisville, Ky., formerly the Western Bank of Louisville, has been authorized to begin business with \$300,000 capital. The officers are W. B. Smith, president; F. A. Henry, Jr., vice-president; T. L. Jefferson, cashier, and Louis Metz, assistant cashier.

The Guadalupe Valley Trust Co., capital \$15,000, has been chartered at Center Point, Texas, to erect and repair buildings and to accumulate and loan money. The incorporators are H. M. Burney, G. P. McCorkle, A. Rees, J. N. Hodges, D. Moore, P. Hood, H. T. McCorkle, all of Center Point.

It is reported that on January 1 the Lowdon National and the National Exchange banks of El Paso, Texas, will be consolidated under the name of the American National Bank, with \$200,000 capital. T. M. Wingo of the Lowdon National and J. M. Wyatt of the National Exchange, as well as others of the present officials of the two banks, will, it is reported, be connected with the new bank.

The Bank of Huntsville, capital \$25,000, has been incorporated at Huntsville, Ark., by S. H. Slaughter, D. F. McMillan, G. N. Rattenbury, J. F. Baggett, J. R. Harris, C. M. Lawson, L. H. Gibson, A. L. Trent, J. S. P. Johnson and J. F. Mayes. The officers are S. H. Slaughter, president; J. S. P. Johnson, vice-president; L. H. Gibson, secretary and treasurer; C. M. Lawson, J. R. Harris, directors.

New Securities.

Aberdeen, Miss.—S. R. Florence has purchased for F. R. Fulton & Co. of Chicago \$70,000 of water-works and sewer bonds, paying a premium of \$714.02 and accrued interest and cost of furnishing the blank 5 per cent. bonds.

Aiken, S. C.—The city has sold to local parties at par the 4 1/2 per cent. bond issue, with the exception of two bonds which brought 100.25 each.

Annapolis, Md.—The County Commissioners of Anne Arundel county will receive bonds until noon on November 15 for \$20,000 of bridge-repair bonds at 4, 4 1/2 or 5 per cent. interest. Charles Himelheber is clerk.

Bellevue, Ky.—The city will vote on the question of issuing \$45,000 of 4 per cent. high-school building bonds.

Big Stone Gap, Va.—The Finance & Trust Co. of Big Stone Gap has purchased at 101.25 the \$20,000 of 5 per cent. 30-year water and improvement bonds.

Brady, Texas.—The city has voted in favor of issuing \$13,000 of 4 per cent. 5-10-year schoolhouse bonds. W. D. Crothers is secretary board of education.

Brundidge, Ala.—A vote will be taken to decide the question of issuing \$150,000 of Pike county road-improvement bonds.

Cleburne, Texas.—The attorney-general has approved the issue of \$25,000 of street, bridge and fire-station bonds.

Dallas, Texas.—James C. O'Brien & Co. of Boston have purchased \$30,000 of school bonds at par and accrued interest.

Dallas, Texas.—The city has sold \$50,000 of Ninth ward improvement bonds to the Woodmen of the World, W. A. Fraser being head consul of the Texas jurisdiction.

Danville, Va.—The city will vote on the question of issuing bonds for water-works and bridge.

Denton, Texas.—The city is considering the issuing of \$25,000 of water-works and electric-light bonds.

Fairmont, W. Va.—A vote will be taken

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next spring to decide the question of issuing \$100,000 of school bonds.

Ferry, O. T.—An issue of \$5000 of Noble county school bonds has been registered.

Gainesville, Texas.—The City Loan & Trust Co. of Chicago has purchased at par \$25,000 of 5 per cent. 10-40-year city hall bonds.

Greensboro, Ga.—The city will vote on the question of issuing \$7000 of 6 per cent. 10-year electric-light-plant bonds.

Hobart, O. T.—Territorial Auditor Baxter has registered \$440 of Kiowa county school bonds.

Houston, Texas.—R. C. Todd & Co. of Cincinnati have purchased at a premium of \$6833 the entire issue of \$100,000 of 5 per cent. 40-year bonds.

[For Additional Financial News, See Page 30.]

